Florida WILDLIFE

The Walking Catfish
Camp Blanding WMA

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Outdoor Recreation

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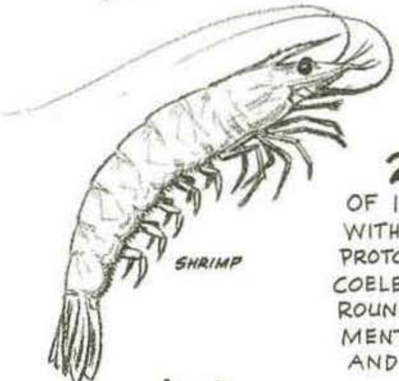
MAY 1975
The Florida Magazine for all Sportsmen
35 CENTS

The ANIMAL KINGDOM

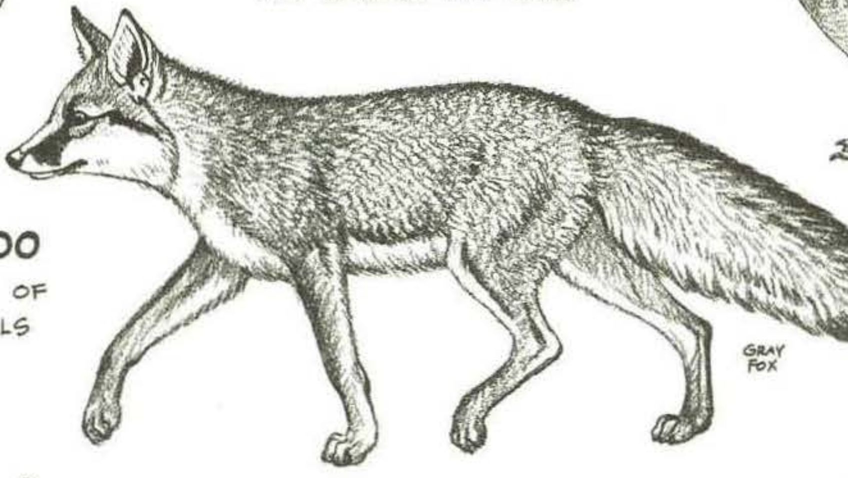
WORLDWIDE THERE ARE APPROXIMATELY —

900,000 SPECIES OF INSECTS



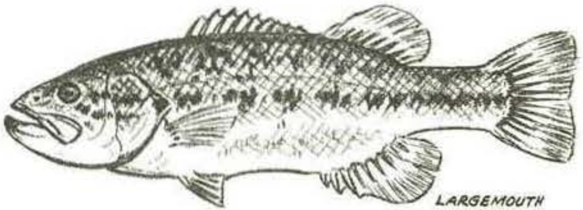
232,000 SPECIES★ OF INVERTEBRATES (ANIMALS WITHOUT BACKBONES) INCLUDES PROTOZOANS, SPONGES, STARFISH, COELENTERATES, FLATWORMS, ROUND WORMS, MOLLUSKS, SEGMENTED WORMS, CRUSTACEANS AND SPIDERS AND ALLIES

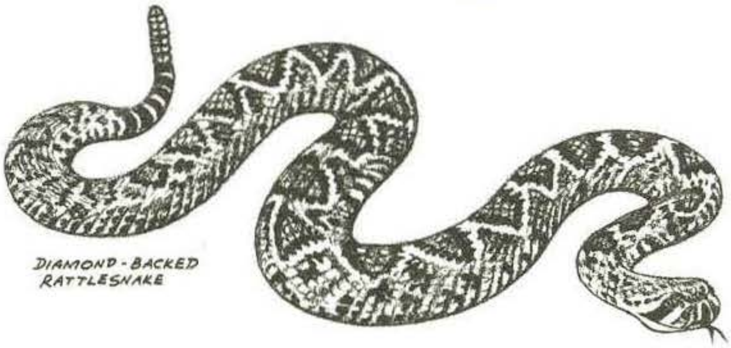
20,000 SPECIES OF BIRDS



12,000 SPECIES OF MAMMALS

30,000 SPECIES OF FISH





6,000 SPECIES OF REPTILES

1,500 SPECIES OF AMPHIBIANS

★ **SPECIES** (spē'shēz) A distinct kind.

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The Cover

Once a common food item on Florida frontiersmen's tables, the Limpkin is now protected in its remaining haunts. It is not an endangered species but certainly a unique one. See page 22.

Ektachrome Photo By Janet Alexander

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Camp Blanding Wildlife Management Area

By LAURENCE ROSSIGNOL

Photo By Morrie Naggiar

SINCE ITS CREATION AS A wildlife management area in 1956, Camp Blanding has been one of the most heavily hunted of the nine public hunting areas in the Game and Fresh Water Fish Commission's Northeast Region. The popular WMA is located in Clay County, 8 miles east of Starke on State Road 16. Its close proximity to Jacksonville and Gainesville explains the many hours of hunting opportunity provided each year for the urban as well as rural Floridian.

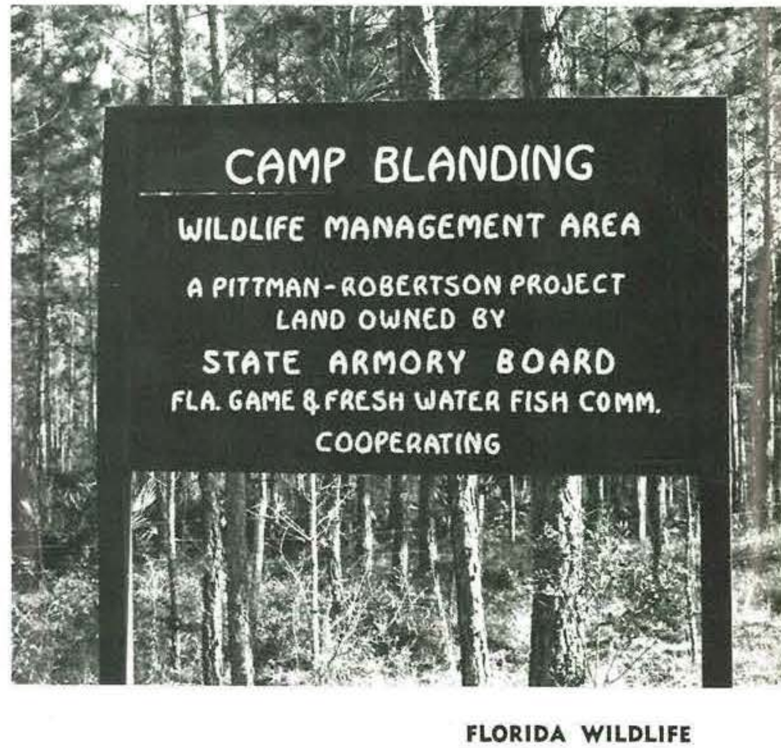
Of the 70,000 acres under lease to the Commission by the State Armory Board, a total of 56,000 acres are open to public hunting. The traditional dog running method is restricted to the 40,000-acre south range, while the still hunter occupies the 16,000-acre north range. The remaining 14,000 acres of the National Guard Camp are closed to hunting as a result of the various military facilities and the DuPont mining operation.

Rolling sandhills followed by flatwoods, bays, and hardwood hammocks comprise the general topographic make-up of the area. The principal tree species include the longleaf, slash, and sand pine; and turkey oak. Numerous branches of Bull Creek and Black Creek keep the area well drained. Hardwood hammocks, ravines, and bay heads complete the physical description of the Camp Blanding Wildlife Management Area.

As is the case on most of Florida's public hunt areas, the white-tailed deer is the most sought after of all the game species found on Camp Blanding. Other game species common to the area are feral hog, turkey, quail, gray squirrel, and a thriving fox squirrel population.

Game populations have remained fairly stable on Camp Blanding in recent years. During the archery, primitive weapons, and general seasons for 1974, hunters harvested 185 deer, 45 hogs, and

This is No. 11 in a series of articles on Florida Wildlife Management Areas. Maps and regulations on individual areas are available from regional offices and from the Game & Fresh Water Fish Commission, 620 S. Meridian Street, Tallahassee, Florida 32304.



Photos By Laurence Rossignol

The white-tailed deer is the most sought after of all game species on the 56,000-acre hunting area. The harvest is fairly good. The area's well-laced with roads, although vehicular traffic on the still hunt portion's restricted to certain grades, to give the still hunt enthusiasts a better chance. In dog hunting portions, vehicles have much freer rein, and there are miles of road—enough to satisfy the most vehiclebound nimrod.

16 turkeys. Because of National Guard training, the area is not open for a spring gobbler season. Also, fall turkey hunting is restricted to the last 20 days of the season because of heavy hunter pressure in a relatively small area.

Though relatively scarce when compared to the deer population, and usually ignored by the dyed-in-the-wool deer hunter, an occasional feral hog of sizable proportions is harvested on Camp Blanding. If you're a Blanding hunter with a burning desire to adorn your mantle with a mounted "tusker," stick to the numerous low-lying creek drains and bays along Black Creek or the area lakes and ponds.

In addition to the usual nongame wildlife populations found throughout the state, the Camp Blanding area supports several endangered wildlife species. Alligator, scrub jay, red-cockaded woodpecker, and an occasional panther and bald eagle are among the wildlife inhabitants reported in the area.

Although the water acreage on this area is considerable, most bodies are too deep to be of interest to waterfowl to any great degree. Commission wildlife managers, nevertheless, have stimulated the annual wood duck brood production with the installation of approximately 50 artificial nesting boxes. Several different type boxes are being tested on the area in an attempt to reduce predation and further increase nesting success.

Vehicular traffic on the still hunt portion of the area is restricted to the graded and paved roads. This is to allow, as nearly as possible, a primitive and undisturbed hunting opportunity. For those who like to ride, however, there are more roads in both the still and dog hunting portions than most people can afford gas to cover.

As the facility is primarily used for National Guard training, access, except to the fish management area lakes, is limited to certain military personnel and properly licensed hunters during the open season. Hunters must check in and out daily between 6:00 a.m. and 6:30 p.m. No public camping is permitted inside the area, but there are several camping areas nearby.

Included in the Camp Blanding WMA are three lakes currently managed by the Commission's Fisheries Division for fishing improvement. These clear water, spring-fed lakes provide many hours of good fishing and recreation. The lakes have a total of approximately 1,652 surface acres and 10½ miles of shoreline. Lowry and Magnolia lakes have

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improved ramps for easy access, while Perch Pond is kept in a semiprimitive state to provide fishermen a wilderness-type fishing area.

Artificial fishing "reefs" made of used tires have been constructed in the three lakes to improve fisherman success. Bluegill fishing on the attractors is particularly good during the cooler months, when fishing success is 12 times that of the shoreline areas. The fish attractor sites are marked with floats or can be located by maps available from the Commission's Lake City office. (See page 1 for the mailing address.)

Approximately 75 acres of highly palatable wildlife food, in acre size plots, and 15 acres of army tank trails are planted annually to a combination of chufas, combine peas, millet, wheat, oats, and rye, along with the installation of turkey feeders. These plots and feeders serve as an additional food source for deer and turkey while at the same time increasing hunter success.

Along with the Commission's fish and wildlife management efforts, the Armory Board Forestry Department maintains a full-scale forest management program in Camp Blanding. Area wildlife benefits not only from the game management activities but the forestry program as well. In addition to wildfire control and controlled burning, the foresters minimize the cutting of hardwood trees beneficial to wildlife within the area.

As might be expected, the Camp Blanding National Guard Camp is the scene of much military activity throughout the year—with a slight lull during hunting season. Scattered throughout the area are parachute drop zones, artillery impact areas, tank ranges and trails, bomb targets, large and small caliber firing ranges, etc. While most live ammo, bombs, and shells land where aimed, an occasional stray, unexploded piece of military ordnance is to be expected. It goes without saying that hunters should watch their step and *never* touch anything resembling a projectile.

Because of the area's location and reputation, Camp Blanding is faced with a serious hunter pressure problem. It simply can't accommodate the volume of people that would like to hunt there. Like other management areas in a similar situation, the use of the "Camp Blanding Only" area stamp and a shortened season served as a temporary solution. Future considerations include a drawing system with a ceiling quota for the first nine days of the season.

While the quota will temporarily inconvenience a few hunters, it appears to be the best method of guaranteeing that Florida's public hunt area program will continue to include good hunting areas like the Camp Blanding Wildlife Management Area. ●

Some 1600 acres of water in three lakes are managed by the Commission's Fisheries Division. Two of the lakes, Magnolia and Lowry, have boat ramps; the third, Perch Pond, is kept in semi-primitive condition. Bluegill fishing is especially good in the vicinity of fish attractors during cool months.

Photo By Gene Smith

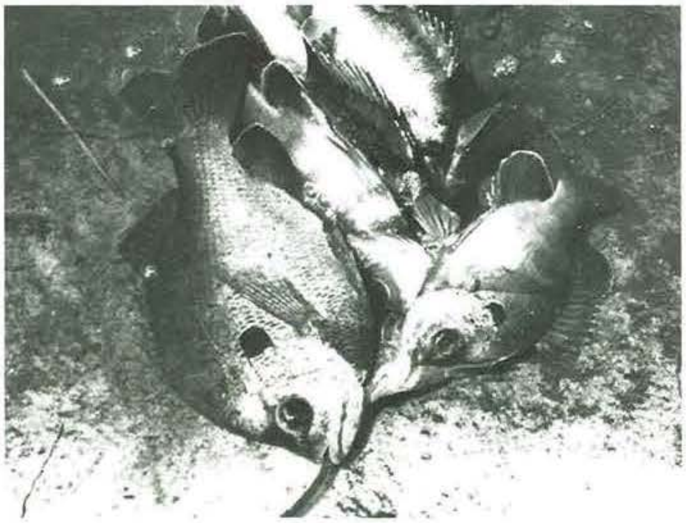

Photo By Laurence Rossignol

Shoreline Schoolers

game fish feeding on tiny bait along the shoreline or in a weed patch requires the angler to make a change in his tactics

By **CHARLES WATERMAN**

FISH STRIKING VERY TINY MINNOWS along a weedy shoreline or against a hyacinth jam have given me some of my more frustrating days. It's happened with several kinds of fish, fresh and salt water, including black bass, crappie, bluegills, snook, tarpon, and jack crevalle.

By "tiny" minnows I mean little transparent things of an inch or so. I won't try to get technical about the right names for them. Probably there are many kinds that get involved in such orgies. Some fishermen just call them "glass minnows," although that probably should be applied to some specific tribe. Just call them little bitty fish that other fish eat and we'll understand each other.

I know I'm not alone in being chumped by shoreline "schoolers." I have seen some good fishermen just go off and leave them, muttering that they're small bass and you can't catch them anyway. The same thing has happened occasionally with other fish, especially snook.

This is not a typical schooling operation. The minnows are tight against the shoreline vegetation, and the fish striking them don't move very far. Apparently, the minnows just re-form and mill around in the same place between rallies. Such striking sometimes lasts for days in the same location. It's nearly always at a spot where a small creek empties into a river or canal. In tidal waters, of course, most of the action is when the water is running out and the minnows are being pushed with it.

Now the gimmick is that you can't imitate the minnows very well, no matter what you try. Chances are, what you catch the fish with won't look like them at all. It will be a matter of a feeding fish accepting what Roy Martin calls a "stranger" in place of what the fish has been eating. The thicker the striking fish are, the better your chances, because competition excites them and makes them careless.

Two of us covered ourselves with glory this year when we saw happy splashes and tiny bait showers at the mouth of a small creek choked with hyacinths. It appeared that the bass were all 10-inchers, but we guessed rightly that there were some better fish in with them. We tried some very small spinner baits but caught nothing. Then we tried some little wooly worms on a fly rod without result, and finally went to very small popping bugs, which worked but only in a certain way.

We'd wait until the fish were up on top, slap the little bug in among them, and keep popping it but not moving it much. About the time the rally began to peter out a bass would grab it and we must have caught and released about 15 before we knocked off, none quite making 2 pounds but large enough to be fun.

I blab this story in detail because I've done the same thing before.

Another rig that's worked has been several tiny feather streamers on a single leader. A very small

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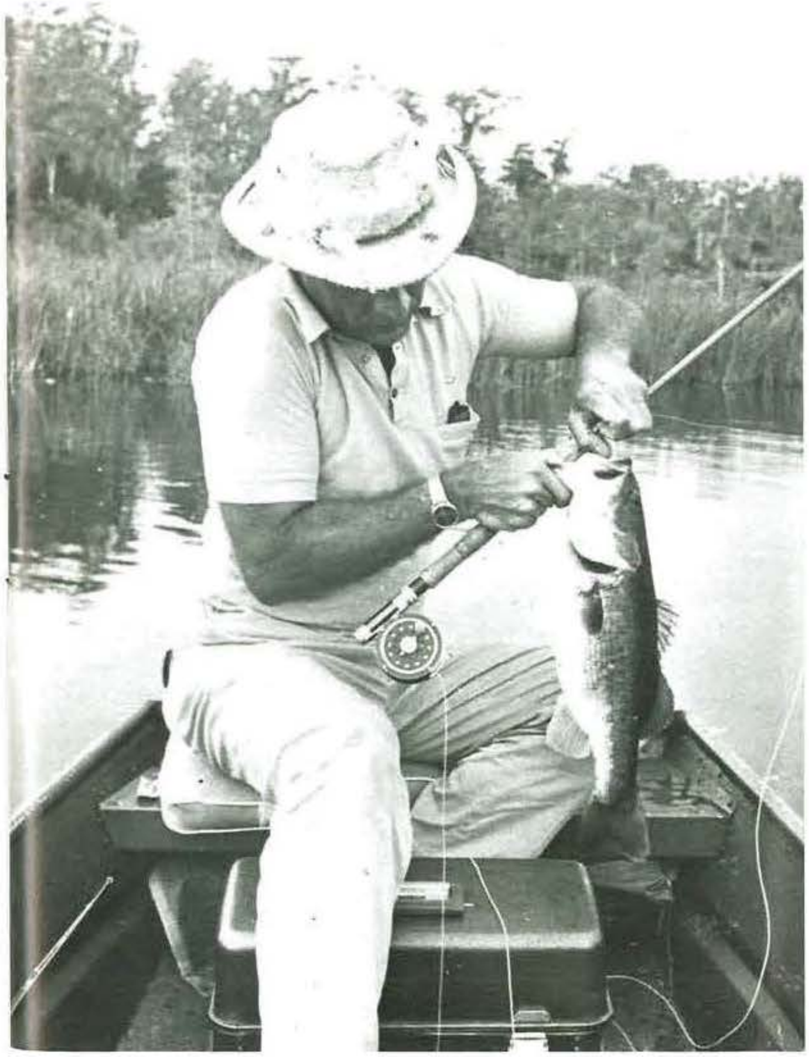

Fly rod bug did for this bass against the shoreline grass.

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spinning plug has scored too. The little streamers probably matched the bait to some extent.

About the nearest I've come to matching small minnows with anything else was when snook were pounding bait in some south Florida canals and I used a flyrod Muddler Minnow, a little burr-headed thing of deer hair and turkey feather. I'd cast it where the snook were striking and then let it sink. Evidently, they'd take it for a knocked-out baitfish and scoop it up down near the bottom when I moved it slightly.

There are times when almost anything will take such striking fish, but I've been skunked a number of times.

Three of us once came on a big school of snook tearing up a little bay where you could see the fish and the bait, and they weren't afraid of the boat. We anchored right in the middle of them and cast everything we had without a strike—and that was good-sized bait, at least as large as some of the lures we tried. I'd have bet the outboard motor I could get a strike every other cast there, and we were 25 miles from the dock.

It helps if you stop to think of what's going on before you start fishing. Here are these fish, not moving much but simply waiting until the time is ripe before plowing into the bait. It's a cooperative project, and when several fish go to work at once the bait becomes confused, but at the same time each fish is set on getting his share, so there's competition involved. Hunger, excitement, competition, and showering bait are likely to make a fish careless, and he'll strike something he wouldn't give the time of day when he's more relaxed.

When fishing school bass in open water, one of the surest tricks is to throw a plug between a fish and the bait he's chasing. He has his strike program running through his nervous system, and he'll be mighty foolish for an instant. After he gets his live one, or misses it, he's better collected and back to his usual persnickety self.

It's speed and accuracy that make the difference between a school bass expert and the beginner. If you're a little late for a short rally, the fish have lost their foolhardy enthusiasm, even though they can see your lure just as plainly as they could have seen it a few moments earlier. Wait a few minutes and they may be off their rockers again momentarily.

Open water schooling fish either chase shoals of bait or lie in wait for them. In this shoreline business, the bait is there all the time, but after each rally it scatters so badly it's hardly worth chasing. Then the minnows draw together in a compact school again, and the fish go back to work.

All of these pronouncements sound very logical but they don't explain why so many of the larger fish caught around such places are hooked when nothing appears to be going on. The old explanation is that bigger fish can't compete with swifter youngsters, so they just hang around down below the action to pick up cripples. In other words, the bigger fish don't really participate most of the time. But anywhere there are striking fish there are favorable conditions and maybe a bigger fish just happens along.

THE CREEKS ARE FULL OF PEOPLE who have used electric motors more than I have, but I hear considerable talk about them. They sure have pushed oars into the woodshed. From those with a lot of experience and through some of my own fumbling, I have come up with observations that may be old stuff, may make you sore, but might help somebody in the market.

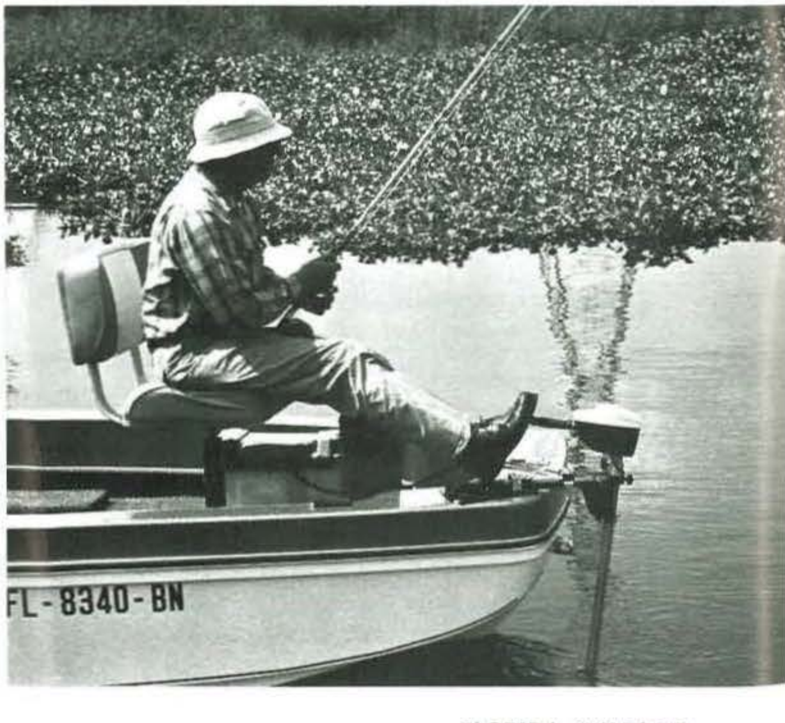
The logical and efficient place for an electric is in the bow of a boat. It pulls much better than it pushes. When I first tried one on the stern many years ago, I found steering was far too slow. In the stern of a boat over 12 feet, an electric has a hard time turning into the wind or current, even when there's considerable pushing power.

I fastened a motor to the side of a 12-foot johnboat once because that was the only place it seemed to fit. It was near the bow, but not near enough, and when a wind came up I found I couldn't control the thing at all. It went sidewise and not where I wanted to go. Only when the weather was perfectly calm could I get any use out of it at all. I later rigged the motor in the bow and it went fine.

I've used an electric on a canoe with pretty good results, but here again you need it up in the front end.

From the front I find that a 12-volt motor works

With practice, you can handle an electric motor by foot.



pretty well, even on an 18-foot bass boat. I am not discrediting the potent 24-volters, but I believe you can get along without them in most situations.

When fishing in a river, working the shoreline, I find it's much more convenient to head upstream rather than down. Pretty obvious, but the current can get too quick for you sometimes. In some of those cases the 24-volt motor would be a help. All electrics are more powerful than they used to be, however.

The foot controls work beautifully but are reasonably complex. My beef with them is that the foot-controlled motor can be a nuisance when you want to move around the boat and still keep control. Some of the competitive bass fishermen still stick with the hand-operated units.

Some of the motors go well in salt water, but some of them have parts highly vulnerable to rust and corrosion. The propeller dropped off one of mine after a few days of salt water. Simple matter of a chintzy little pin rusting away.

Going in for a hung-up lure is a hazard for the electric since you're likely to run into a submerged something or hit the bottom. However, there isn't as much breakage as you'd expect in these circumstances. Not that there's any sophisticated shock absorber, just that there's considerable give to the things before they break.

Some of the retractable brackets used to lift and lower electrics into the water are real abortions, especially after some of the smaller pieces drop off. This is no place to economize. I could type this better if I hadn't repeatedly pinched my fingers in poor ones. Get the best you can find.

The basket-type shields to keep weeds out of the propeller are fine. Some electrics don't have a nose sticking out ahead of the prop, a good selling point.

Most of my troubles with electric motors have been little ones. Except for some of the gingerbread jimcracks, they're pretty husky.

BACK IN 1911, FIELD AND STREAM started their fishing contest. There was $1500 worth of prizes for the first competition. Since then the monetary prizes have been discontinued, but it remains the daddy of fishing contests. Winners now get award pins, and there's a badge of honor for fish over a certain size in various categories.

The feature introducing the first FIELD AND STREAM contest began with, "Now tell the truth for once in your life!" At the beginning the contest was only for the United States, but in 1970 it went worldwide. There are now 85 eligible species with appropriate fly casting and line test classes, the important revision occurring in 1962.

This is not a promotional item for the magazine, just a note about the beginning of recordkeeping. It's a very complicated business—sometimes a thankless task—although FIELD AND STREAM has made a lot of points with their project.

The International Game Fish Association has been around since 1939, and this one is really a labor of love. It was started by a little group of big game anglers who felt their game should have established rules, and it has been privately endowed since the beginning, although they're now trying to make it self-supporting through memberships.

So far, the IGFA has been active only with salt water fish. It operates from an office at 3000 East Olas Boulevard, Fort Lauderdale, Florida 33316. Since its beginning it has had only three presidents, Dr. William King Gregory, Michael Lerner, and William K. Carpenter, the current chief. Elwood K. Harry is the executive vice president.

To most fishermen the IGFA is a sort of shadowy figure to complain about when a big fish is found to be ineligible. Admittedly, the organization was set up for offshore angling from large boats and there wasn't much thought of plugcasting, spinfishing, or fly fishing at that time. The rules are marvelously simple, and if they were any different you'd need a lawyer to break a record.

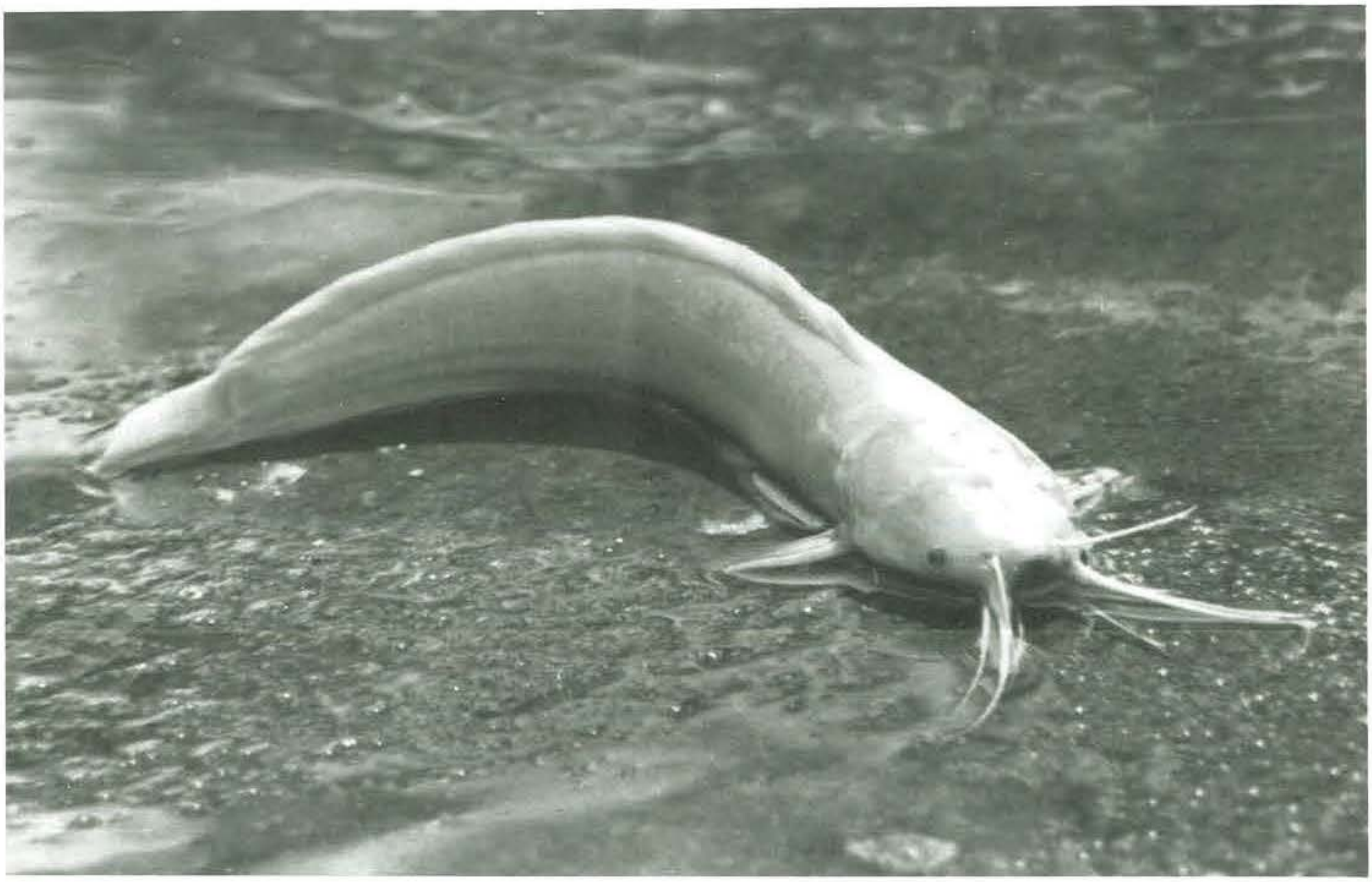
For a time, gang hooks would disqualify a catch, something that went hard on the plugcasters but had logical reason in offshore fishing. Now you can set a record with a couple of trebles on an artificial. The fly fishermen are left out and have set up their own records in the Salt Water Fly Rodders of America. Spin fishermen used to branch off on their own, but now most of their entries can go in with those of other anglers. (There is, however, the International Spin Fishing Association, P.O. Box 81, Downey, California 90241, established in 1951. The ISFA keeps up with both fresh and salt water records.)

There are hundreds of fishing contests every year all over the country. Since most of them are local in nature, the records kept are not very important. The IGFA not only does a job on the records but is into conservation and research. Deserves support.

A BAIT LAUNCHER POWERED BY a .22 black powder blank and a rocket is being introduced by Edward Whritenour, of New Jersey. Whritenour, who kids me a little about my own kidding about wild fishing devices, says his BOO-STA-LURE casting device is the product of 12 years of work. He figures on advertising on TV and in magazines.

The launcher, bait carrier, and motivator (rocket) clamp to a conventional rod, and Whritenour says it will jet the bait 400 feet or better "over the surf, regardless of wind direction." Mr. Whritenour, who doesn't sound like one, says he "may be characterized as another 'goof.'"

The unit is only about a foot long. ●



an Asiatic invader threatens Florida waters

The Walking Catfish

WHEN DR. JAMES N. LAYNE, director of the sprawling Archbold Biological Station, located a few miles south of Lake Placid, said he had something in the lab that he thought might interest me, a walking catfish was probably the last thing on my mind. But there it was. *Clarias batrachus.* The much-publicized, generally despised walking catfish.

Nine inches long and an attractive golden brown in color, *Clarias* lurked at the bottom of a 20-gallon tank and watched me with button-bright eyes. Eight whiskerlike barbels, each a delicate sensory organ, adorned his lips and moved gently as *Clarias* probed the water around him.

"You've got to watch him," Dr. Layne cautioned as he took the heavy weights off the wire mesh that covered the top of the tank. "Surprisingly, *Clarias* is a pretty good jumper."

I transferred the fish to a covered ice chest half filled with water, and as I drove home I thought about all I had heard and read about Florida's infamous walking catfish.

Between 1964 and 1966, exotic fish importers brought thousands of walking catfish into the United States from their native Thailand to satisfy a growing demand among amateur aquarists, who were curious about the fish that could reportedly "breathe air and walk on land."

But the buying public's curiosity was soon satisfied, and available supplies began to exceed demand. Thousands of walking catfish became stockpiled in shallow holding ponds at a fish farm north of Fort Lauderdale near the Broward-Palm Beach County line.

Now Florida—being a water-dominated state with a drastically-altered natural drainage and a very pleasant climate—suited *Clarias* just as well as it did the millions of Sunshine State residents and the more millions of northern "snowbirds" who make their way south each year. And a short walk from the crowded holding ponds on the fish farm to the vast, interconnected gridwork of canal systems nearby was all *Clarias* needed to gain a foothold.

In the next 5 years, *Clarias* spread throughout the manmade drainage complex of southeast Florida and firmly established itself throughout both Broward and Palm Beach counties. To the west, *Clarias* found its way into Lake Okeechobee, the second largest freshwater lake in the United States. And to the east, thanks to its ability to tolerate salinity up to 18 parts per thousand, the walking catfish invaded the extensive brackish waters of the intracoastal waterway.

And now it seemed that *Clarias* was on the move again. As I prepared to transfer my catfish from the ice chest to a covered 5-gallon glass tank in my studio, I wondered how *Clarias* perceived the drastic events of the last few days.

A week earlier, Mike Yusko, of Lake Placid, had been operating a pump and dragline in an irrigation system just west of Brighton in Glades County. As the water level dropped, Mike saw several strange looking catfish in the water. They ranged in color from a light golden brown to a very dark brown. Immediately suspecting that he had found a new infestation of walking catfish, Mike quickly netted seven of them and took them to Dr. Layne for identification.

Mike's initial identification was confirmed. A telephone call to a nearby Florida Game and Fish Commission office revealed that this was indeed a significant sighting. No other reports of walking catfish had come in from this area. *Clarias* had once again extended its range and now appeared poised for an invasion of the Kissimmee River Basin.

But if my catfish seemed indifferent to the concern regarding the invasion of its kind into Florida waters, he was equally unimpressed with his new home. As I dropped him into the tank, he carefully examined all four corners and then buried himself in the sand at the bottom.

Called "pla duk dam," the "dull-colored, wriggling fish" in his native Thailand, *Clarias* and his kind are found throughout southeast Asia and Africa, where they thrive in swamps, ditches, canals, lakes, and rivers.

The major danger faced by *Clarias* in his native environment is drought. To combat that threat, the walking catfish has developed special adaptations to protect itself and to insure survival.

For one thing, *Clarias* has a modified respiratory apparatus. Elaborate organs located behind the gills function like lungs and allow this fish to breathe air directly from the atmosphere. In fact, *Clarias* can survive for several hours while out of water.

Once my catfish became more accustomed to his new home, I was able to observe that he came to the surface for a gulp of air regularly—about once every 5 to 7 minutes. This remained true even when the water was well aerated and the oxygen content was more than adequate.

In addition to the walking catfish's ability to utilize free air in the atmosphere, it is able to use its pectoral fins to aid in locomotion, particularly the long, stiff spines that can be extended at right angles to the body. When the fish is out of water, these pectoral spines dig into the ground to prevent *Clarias* from jackknifing as he slithers overland with distinctly snakelike movements.

Both of these characteristics have served the species and have greatly enhanced its success in the Sunshine State. For beyond making it possible for *Clarias* to escape the holding ponds at the fish farm, they have enabled it to thwart the most drastic control measures by conservation personnel.

How *do* you kill a fish that simply walks away when you poison the water or drain the pond?

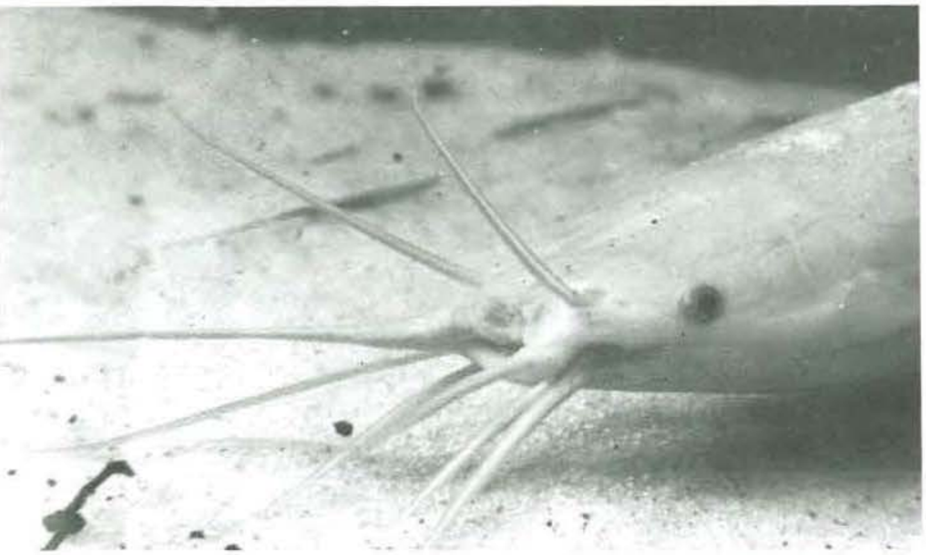
The answer is, of course, you don't kill it. But you certainly do kill the much more desirable forms of native fish that you are trying to protect in the first place.

But why do the native fish need protection? The answer is relatively simple, and provides a classic illustration of the fragile relationships that exist in a natural system. Once an exotic, or non-native, species which *lacks natural enemies* and *has a high reproductive rate* is introduced to a "new" environment where it *can find a readily available food supply,* it is bound to have a drastic impact on its new environment and new neighbors. This was

(*Continued on next page*)

Photos By Dave Norris

By **DAVE NORRIS**



Unlike most fish, Clarias can breathe air directly from the atmosphere and can survive hours out of water. Strong pectoral spines help anchor the fish as it "walks" overland with slithering, snakelike movements. Adorned with whiskerlike barbels, Clarias, right, resembles native catfish.

(*Continued from preceding page*)

precisely the case with *Clarias,* and, consequently, Florida's aquatic environment has been affected in at least three ways.

First, the walking catfish is a prolific breeder. Populations equivalent to 3,000 pounds—or, put another way, 1,000 three-pound catfish—per acre can and do occur. Native fish are simply crowded out of the available space.

Second, such rapidly growing, large populations of walking catfish present more desirable native catfishes, and other species as well, with intense, almost impossible competition for a limited food supply.

And finally, *Clarias* indulges in direct predation on the eggs and larval forms of native fish, and will sometimes attack and kill adult fish.

In fact, the invasion and subsequent infestation of a new pond by *Clarias* follows a definite and depressing pattern. Within a few weeks the aquatic community is stripped of animal life. And, adding insult to injury, after eating itself out of house and home during the initial feast, the gluttonous *Clarias* may go into hibernation until the next rainy night, when it may attempt to "walk" to the greener pastures of the next pond. Despite a formidable appetite, *Clarias* can go without eating, if necessary, for 8 months or more and suffer only a minor weight loss for the inconvenience.

In a nutshell, then, *Clarias* does have a devastating effect in Florida, because it tends to reduce any freshwater community it invades to one common denominator: more walking catfish.

What does the future hold for *Clarias?* Will the walking catfish continue to extend its range? Probably. And the long-term results could well prove *Clarias* to be the most harmful introduction to any North American area witnessed to date. Many knowledgeable biologists are extremely concerned about the possible impact the walking catfish may have on a delicate ecosystem like the unique Everglades.

There is some light at the end of the tunnel, however. *Clarias* has been the subject of an intensive 5-year, $125,000 study underwritten by the Florida Game and Fresh Water Fish Commission. This study, which will be finished soon, should increase our knowledge of the walking catfish and may even suggest new ideas on ways to control it.

One early finding revealed that *Clarias* is susceptible to cold weather. Sustained temperatures of less than 30°F. have adverse effects on the walking catfish over a period of several days. Those fish which do not succumb to the cold itself are weakened and may develop skin infections that will kill them. And although there may be a tendency —due to natural selection—toward the development of walking catfish that can tolerate colder temperatures, this Achilles heel will probably help check their numbers and rate of advance for a while, and ultimately restrict their ability to further extend their range.

It has been noted by some authors that not only is *Clarias* edible, it is actively raised for market purposes in southeast Asia. And while it has yet to be demonstrated that *Clarias* can equal our native fish in texture, flavor, or quality as a sport fish, it is not inconceivable that some Floridians may develop an appetite for walking catfish.

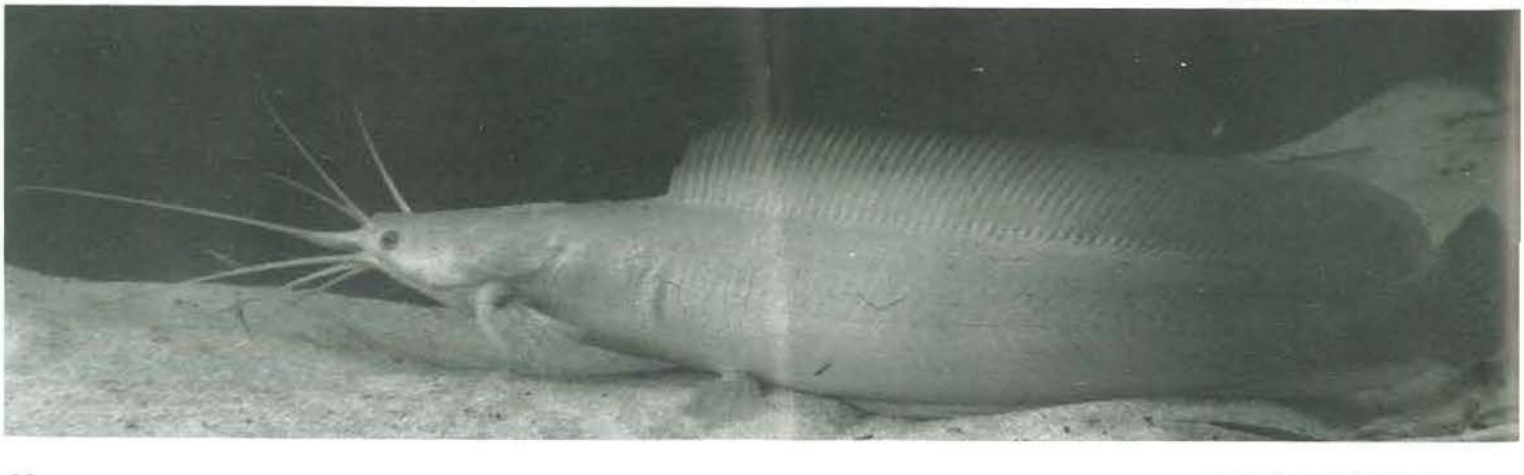
Finally, there is the matter of direct predation by members of the wildlife community. Just because an exotic—like *Clarias*—has no natural enemies when it first enters a new ecosystem does not mean that effective natural predation cannot or will not eventually develop.

The American alligator has often been accurately portrayed as the savior of the Everglades in time of drought, because of its tendency to dig holes and conserve receding waters. Perhaps this interesting reptile will rise to a new challenge and develop a taste for *Clarias.*

In any event, *Clarias* is here to stay. This air-breathing, nocturnal land rover is now so firmly established throughout the southeastern portion of the state that its elimination is physically, and fiscally, impossible. ●

The elongated outline, stubby tail, and the long dorsal fin are identifying marks of the walking catfish. Color ranges from light tan to a golden brown. In addition to their "walking" ability, the fish are also good jumpers.

Photo By Dave Norris



THE CHAIRMAN COMMENTS . . .

By O. M. PHIPPS, Chairman

IN AN AGE WHEN THE CONSUMER is taking a hard look before he buys, the Game and Fresh Water Fish Commission is taking a very hard look before it buys a supposed cure-all for aquatic weed control.

The white amur or grass carp has been much publicized lately as *the* answer to all biological weed control. It has been called a "superfish" with almost magical qualities to destroy the hydrilla which is threatening so many of Florida's waterways. And when the fish has done its job, it quietly disappears, leaving no harmful effects on the environment.

The Commission, while admitting the fish has possibilities, is not convinced by all the Madison Avenue-type hardsell its promoters have been dishing out.

Hard cold facts, not elusive pipe dreams, are needed before the Commission would agree to release the Siberian weedeater into Florida waters. Any optimism, therefore, should be well-guarded and linked with extreme caution. The beauty of Florida's rivers and streams and their reputation as home to some of the finest game fish are not subjects to be taken lightly.

All the facts are not yet in on the grass carp. A few studies have been done under controlled conditions, but not that much is known about the grass carp in a natural Florida environment.

Just stocking the fish in larger lakes and seeing what happens is not the way to handle the problem. There are far too many unanswered questions to risk such a move.

One of the first things the Commission must know is how many of the fish should be used to control the noxious weeds. That magic number cannot be pulled out of a hat. It must be researched and exact, or the results could be disastrous.

It has already been proven in a study done at Auburn University that a high stocking rate adversely affected the bluegill population by as much as 50 percent in some cases.

And a project now under way by the Commission has shown an alarming drop in the number of shallow water fishes after the grass carp decimated the aquatic vegetation.

The known feeding habits of the fish suggest that valuable aquatic plants as well as noxious weeds may be eliminated by introduction of the grass carp. How do you tell a fish what to eat, what not to eat, and when to stop eating?

Once the grass carp is in Florida waters, what is to prevent it from reproducing and getting out of control? Its proponents claim it cannot spawn in Florida's waters but it may well do so. Other fish—shad, herring, and striped bass—with camparable spawning habits do successfully reproduce in our rivers.

For that reason, the Commission favors the use of only monosex or sterile fish in the program, and is currently working on producing such fish.

Preliminary research on the grass carp in Florida began in 1969, in plastic pools and very small ponds, and there were promising results. The first significant research as to the fish's behavior in larger bodies of water got under way in 1972 with stockings in four lakes ranging in size from 5 to 30 acres.

What has been found so far has only served to convince the Commission to concur with the American Fisheries Society in calling for extensive research on the effects of the fish on the entire aquatic ecosystem. When something foreign is inintroduced into a system, great care must be taken so that the entire balance is not radically upset. And it is not just the other fish which must be considered if the cure becomes a disease, but everything that relies on the water.

Watershield (dollar bonnet), a prime food for many ducks, has already been proven a preferred food of the grass carp. With Florida being the home of important resident duck populations as well as winter quarters for thousands more, are they to fall victim to man's shortsightedness?

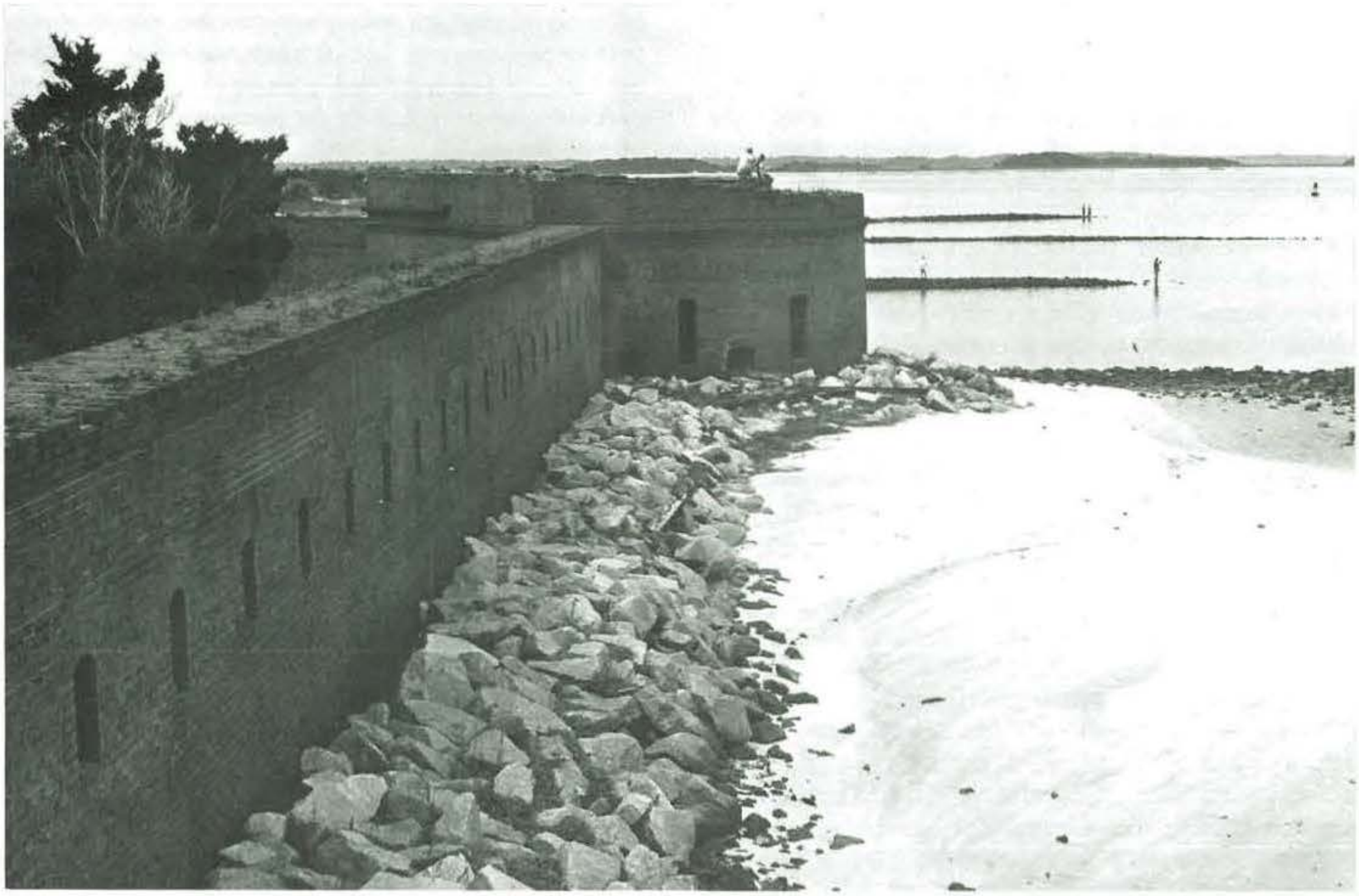
It is known that the grass carp has a very short digestive tract; that almost half of its food is returned to the water as fecal matter. This material, coupled with the absence of vegetation, will serve as a potential source of heavy plankton production which will result, some say, in increased fish production.

But what kind of fish? Researchers say trash fish—particularly gizzard shad—whose increased population could mean a decrease in the game fish population.

Water quality must be considered. Could the resulting nutrients mean the development of dense algae blooms along with the accompanying taste, odor and toxins? And what about turbidity?

Too many questions must be answered before the Commission can open the gates and allow what could be a pest to enter Florida waters. The possibility arises of creating greater problems than currently exist.

The hydrilla problem in Florida is a pressing one. But the Commission is going to be sure its decision is a sound one, and one that will not be regretted later. For, unlike a consumer who can return a bad buy and get his money back, there is no way, once the grass carp is established throughout the state, for the people of Florida to get their environment back if it doesn't work out. ●



nestled in Florida's northeast corner is this historic landmark

Fort Clinch State Park

THE NIGHT WIND SIGHING through the campground trees, and the restless surf murmuring in the distance, could be the muted sounds of the ghosts of long-forgotten pirates, smugglers, soldiers of fortune, or unhappy slaves.

If you're the imaginative sort, and have learned a bit of the history of Amelia Island and Fort Clinch State Park, tucked away in the northeast corner of Florida, the wind and the sea can, indeed, whisper strange, historical tales.

When you visit Fort Clinch State Park at Fernandina Beach, you can camp, boat, and fish in the most historic part of the United States. History here stretches back to 1562 when Jean Ribault, the exploring French admiral, first dropped anchor in Cumberland Sound and the St. Mary's River. Since that time, historical events have swirled around the area, and, strangely, eight flags have flown over Amelia Island and Fernandina (now officially Fernandina Beach), which old Fort Clinch was built to defend in the mid-19th century.

It's a tossup whether the park's modern outdoor facilities or the area's weird history is the most interesting. It depends upon your individual taste. However, you can't escape being exposed to both if you wander this way.

Many fail to realize there is so much history as well as outdoors fun connected with this part of Florida, where the 1,086-acre park is located. Why? Because for years this was a forgotten part of the state, reached only by a dead-end road. Even today more people miss the area than find it, because of Fort Clinch's location off the beaten tourist paths—although it's no longer on a dead-end road. The "dead-end era" ended with the construction of the Buccaneer Trail toll road (50 cents for cars) to Mayport, linking Amelia with the islands to the south.

Most Florida visitors traveling via Interstate 95, U.S. 1-23-301, or U.S. 17 zip past the northeast corner of the state. Unaware of what lies east of these highways, they miss Fort Clinch and Amelia Island. It's easy to make a side trip through history by utilizing A1A, the highway that skirts the Atlantic.

Southbound travelers utilizing U.S. routes 1-23-301 can pick up A1A at Callahan. The highway heads east through Yulee (near where those traveling I-95 or U.S. 17 can pick up the route) to Fernandina Beach, then turns south to follow the portion known as the Buccaneer Trail to Mayport on the St. Johns River.

Northbound on I-95 or U.S. 1, you can pick up A1A at St. Augustine and head northward to Mayport, crossing the St. Johns by one of the few ferries left in the state to reach the Buccaneer Trail. Not only does A1A carry you through Florida's smuggler-pirate-slave country, but it also provides a by-pass around traffic-heavy Jacksonville.

The weird history of the area unfolds when you visit a little museum in old Fort Clinch, the five-sided brick fort, now centerpiece of the state park.

As mentioned, eight flags have flown over Amelia Island during the centuries since white man first arrived. The banners are a strange lot, including those of the United States, the Confederacy, England, France, and Spain, as well as such unusual ones as the flag of Mexico, the Patriot's flag, and the strangest of all, the banner of General Sir Gregor MacGregor. It's said that more flags have flown here than anywhere else in the nation.

Of all the incidents in the history of Amelia Island, none can match those occurring between 1812 and 1817. Fernandina had been a smugglers' base after Jefferson's Embargo Act of 1807 closed American ports. In 1812, a group of "patriots," some local, some from Georgia, crossed the St. Marys River and captured Fernandina, on March 17. Their flag—the Patriots of the Republic of Florida—was replaced the next day by the U.S. colors, by prearrangement, and it appeared that this part of Florida was to become a part of the U.S. However, the scheme collapsed with the withdrawal of U.S. troops on May 6, 1813.

Spain was in control for four years when the strangest series of events occurred. Into Fernandina harbor sailed General Sir Gregor MacGregor, a picturesque Scotsman who had served with Bolivar in South America, and who had conceived the idea of liberating Florida from Spain—naturally for his own profit. He demanded and promptly received the surrender of Fernandina, and ran up his personal flag—a white banner with a green cross.

But things changed rapidly in those days. Promised U.S. financial aid failed to develop, and MacGregor departed for greener pastures, leaving Jared Irwin in charge. Irwin was a fighter. In an encounter at McLure's Hill, on Sept. 13, 1817, not far from today's state park, he and his men repulsed the Spanish forces sent from St. Augustine.

The stage was now set for the strangest episode

(Continued on next page)

Photos By Kit and Max Hunn

By MAX HUNN

Well-preserved walls of Fort Clinch, in photo on opposite page, overlook Fernandina harbor, which it was built to defend. Canepole in the salt, above. Anglers after sheepshead off of Fernandina jetty. Successful fishermen, right, show fine catch, which came from local waters.

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—government by pirates. On Sept. 21, 1817, the French pirate Luis Aury took over, raised the Mexican flag, and annexed Amelia Island to the new republic of Mexico, in his capacity as first governor of Texas. Obviously, he didn't wind up stretching Texas' Mexican boundaries. He just thought big!

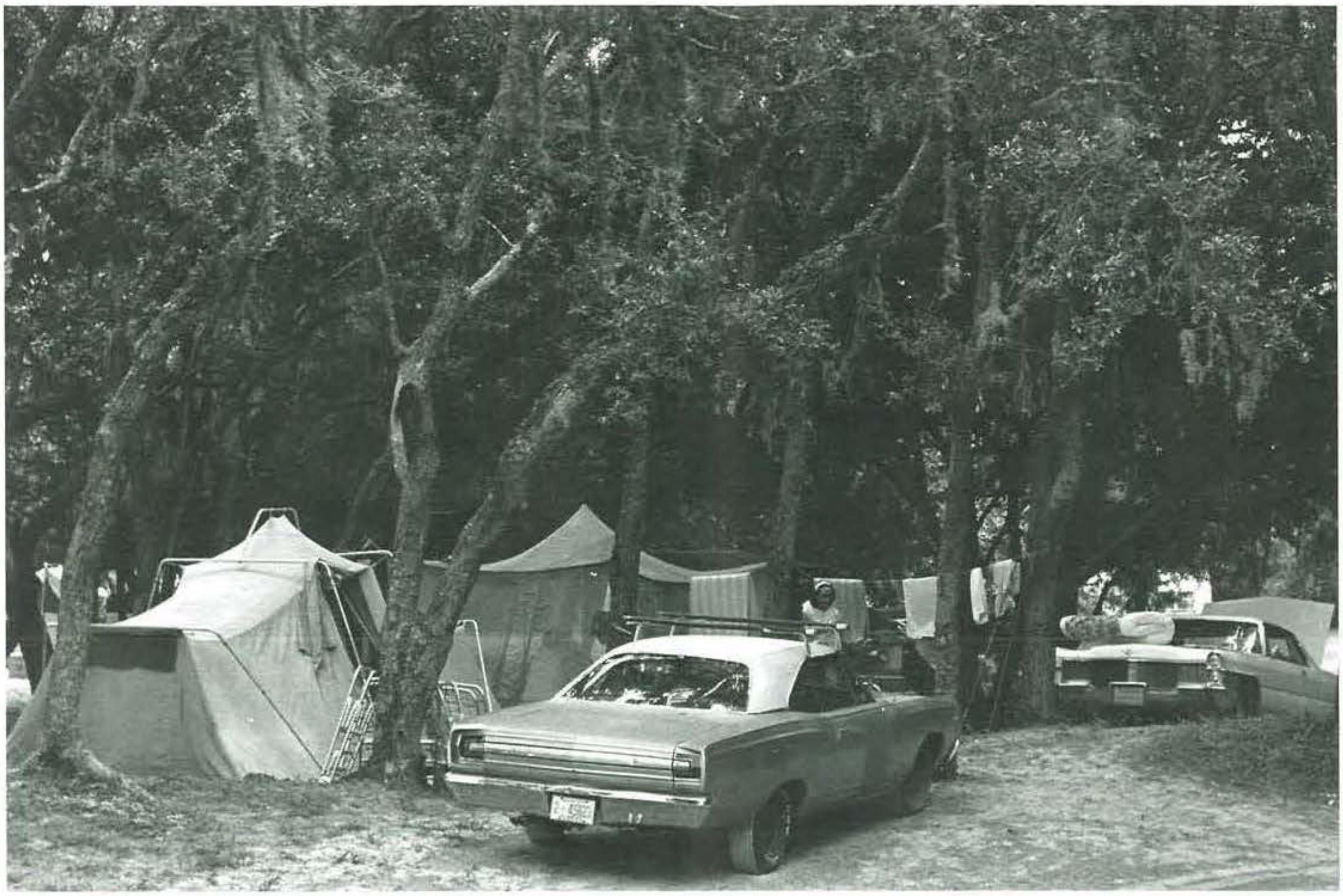
Soon Aury set up a pirate base that ruffled Uncle Sam. The pirate domination lasted until Dec. 23, when the U.S. sent troops to take protective custody and eliminate the pirates. The U.S. troops remained in control unofficially until Florida was purchased from Spain in 1821.

During Amelia Island's swashbuckling days, pirates and outlaws, as well as slave runners, based at Fernandina with impunity. Jean and Pierre Lafitte, the pirates of the Battle of New Orleans fame, were frequently seen, along with lesser known figures in the outlaw world. Zephaniah Kingsley, one of the most notorious of slave traders, operated from Fort George Island, a short distance to the south. (See "Kingsley House," by Virginia Newman, FW, Feb. 1972, page 24.)

Today you can wander old Fort Clinch, which has the distinction of being the first Confederate-held fort captured by Union troops, after your introduction to the area's history at the museum. Construction of the fort began in 1850, and it had not been completed at the outbreak of the Civil War. You can climb the well-preserved brick battlements—excellent examples of mid-19th century fortifications—that became obsolete with the invention of the rifled cannon. Peering through iron-barred windows and gun emplacements, you can watch the fishermen in the waters below the fort or along the harbor jetties in the distance.

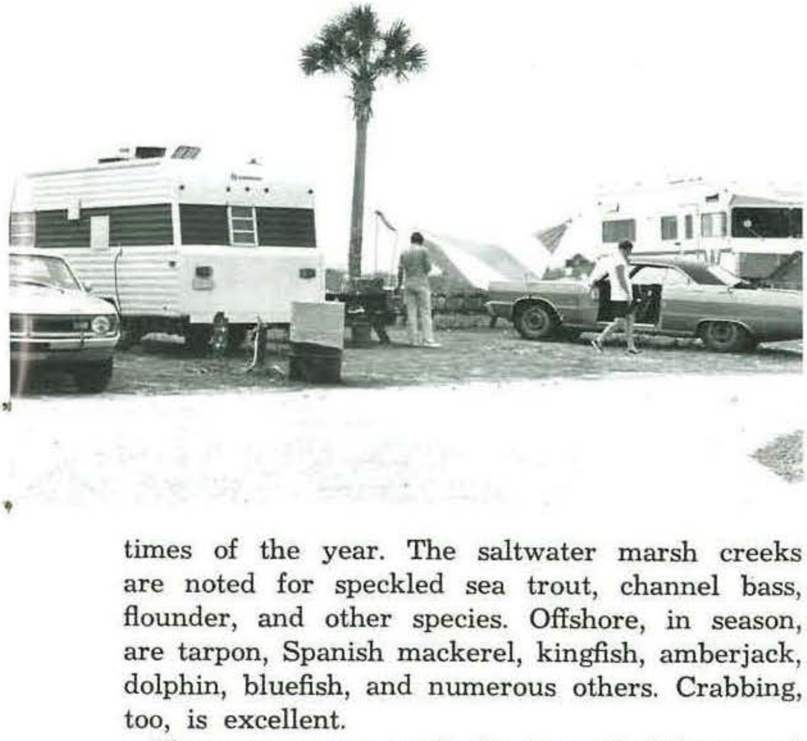
Fishing is excellent in this part of Florida. The harbor jetties are noted for their sheepshead, channel bass (redfish), black drum, and other species. Most fishing is from boats anchored off the jetties, although some fishermen walk out on the slippery rocks. However, this is very dangerous. Anglers regularly get in trouble when trapped by the incoming tide, which comes in fast, accompanied by a powerful current.

In Fernandina harbor are deep holes where black drum can be caught on the right tide at certain



Photos By Kit and Max Hunn

Big sky and a broad expanse of water dominate the scene at Fernandina. Fishing is a popular recreational activity. A tree shaded campground, above, is maintained at Fort Clinch State Park. Plenty of sunshine is fare on open site campground at left. Half of the camping areas are available on a first-come, first-served basis; rest are by reservation.



times of the year. The saltwater marsh creeks are noted for speckled sea trout, channel bass, flounder, and other species. Offshore, in season, are tarpon, Spanish mackerel, kingfish, amberjack, dolphin, bluefish, and numerous others. Crabbing, too, is excellent.

There are nature trails for leisurely hiking, and a beach overlook facing the restless Atlantic.

The park features excellent camping facilities. The fee is $4.00 a night (plus tax) per site for up to 10 persons in one family. Fifty percent of the campsites are reserved, others are on a first-come, first-served basis. Reservations can be made by telephoning (904) 261-4212. The park is open all year but is most popular during the warmer months.

There're two campgrounds, a well-shaded one near the ship channel, and one in the open behind the dunes to the east near the jetties. The camping areas are equipped with tables, grills, and playground equipment as well as rest rooms with hot and cold showers, toilets, lavatories, and laundry tubs. There's a sanitary dumping station for recreational vehicles.

A free boat launching ramp is located near the ship channel. Because of the swift currents near the ramp, swimming is not permitted there. However, you can swim in the Atlantic.

Naturally, there's a large day use area for picnicking. It is equipped with grills, tables, vending machines, playgrounds, and rest rooms.

Fort Clinch State Park affords an unusual opportunity for 20th century outdoor recreation on the site of some of the most bizarre events in Florida history. Maybe the wind in the trees really is the ghost of some long-forgotten historical character. There certainly have been enough of them operating in the Amelia Island area. ●

a calamity that might have been prevented

GUNSHOT!

By JIM LEE

I WAS RUNNING LATE, as usual. Already it was 4:40 p.m. and I had hoped to be in our deer camp by 5:30. The old hunting clothes felt good as I slipped them on. I took the .222 rifle from the gun case and rounded up my knife, compass, and snakebite kit.

My .44 magnum revolver and the shells and clip for the rifle were in a chest of drawers in the bedroom. I slid open the top drawer and picked up the .44 in its holster on the wide western-type belt. I had just turned away when a blast echoed through the room. The dreadful impact of a 240-grain jacketed hollow point threw me around, and I fell on the bed. Almost instantly, it seemed, the bedspread and blanket were soaked with blood. Mickey, my wife, came running down the hall. By this time, I had regained my feet. Blood flowed from the wound in my left arm. It made a funny dull splash on the floor.

"Honey, get a tourniquet. I'm hurt real bad," I told her. Anita, my oldest daughter, who also came rushing in, grabbed a large dishcloth and twisted it tightly around my upper arm. Supported by the two of them, I moved toward the front door.

At this time I felt no pain, just a numbness. For a moment I mused over the fact that the red tile on the front porch was a lot redder than the blood that splashed on it as we crossed.

Getting in the pickup was difficult. I sat in the middle while Mickey reached around me to hold the dishcloth tourniquet tight. It didn't stop the flow. Soon the front floormat of the truck was covered with red—my life-giving blood.

We were just getting well under way to the hospital when the initial dulling shock gave way. In its place, pain swept over me. I told Anita to go around the traffic that was backed up at U.S. 90 and the truck route junction.

In five more minutes we pulled up at Tallahassee Memorial Hospital. The orderlies came running at Anita's urgent signal on the horn. As they rolled me in, my entire consciousness was focused on the pain. I didn't know there could be such all encompassing hurt.

The next hour and forty minutes was a daze of blood pressure checks, I.V. fluid injection, blood transfusions and that all-engulfing pain. During this same period, believe it or not, about four law officers questioned me on the circumstances of the shooting. They didn't get much out of me, just that I was shot with a .44 mag and didn't know how or why.

The deputy sheriff finally left. I was glad. He went to my home, and the investigation he conducted there was quite thorough.

It seems that as I had turned toward the bed, intending to put down the gear I was holding, the Super Black Hawk had slid from the holster. It had fallen with the barrel pointing upward at about a 45-degree angle. The hammer had hit the lip of the drawer, and the gun had fired.

Passing through my arm, the bullet separated from its jacket. The pieces made a pair of holes through the ceiling and right on up through the roof. A 24-inch circle of blood and bone fragments splattered the bedroom ceiling.

Surgery took about 3 hours. The outside wrist bone had a simple fracture. The inside bone had some 4 inches blown away. The inside top muscle had a 2 x 4-inch hole blasted through it. The tendons were blown apart, and extensive nerve damage was sustained.

Now, 5 weeks later, I'm still in a cast from shoulder to fingers. I face the possibility of a bone graft, a skin graft, and surgical removal of the pins that now are holding the pieces of bone together.

What the future holds for use of the arm and fingers is uncertain. I can move all five fingers, but two of them have no feeling. Additional surgery will take several months. Pain from nerve regeneration is constant. Some people say, "Jim, you're lucky to be alive." Others say, "Be thankful for any future use you have of that arm."

Perhaps you wonder why I am writing this ugly stuff. Not only to me but also to my family, it has been a true horror story, let me tell you. I have hunted for some 32 years. I have always considered myself a safe hunter and gun handler. But despite that fact, I made at least four bad errors in judgment. I handled a gun carelessly—it was loose in the holster. All six chambers were loaded. The single-action pistol was on half cock. (With this gun and probably many others, the half safe hammer position doesn't mean the gun can't fire, as I learned to my sorrow.) Finally, I had kept a loaded gun in the house.

If you can take advice from someone who has been there, let me add my bit: Don't take lightly the word on gun safety that comes from such organizations as the Game and Fresh Water Fish Commission, the National Rifle Association, and others. Firearms are part of our heritage. They are the means of much enjoyment. But, as I found out the hard way, you are never so experienced in gun handling that you are immune to accidents. One such incident as I have described imposes a mighty big penalty for a moment of carelessness. Even at that, it could have been worse. ●

Gunsmith Mike Taylor, left, Cobb's Gun Shop, Tallahassee, discusses .44 magnum Super Black Hawk, the gun featured in the article, with author and victim Jim Lee. The suspicion that the half cock safety notch on revolver is safe only if nothing happens—like a bump on the hammer—was confirmed by gunsmith. Hunting editor Ed McLaurin discusses matter more fully in his column in this issue.

Photos By Morrie Naggiar

still too soon to say for certain, but prospects appear bright for

Florida's Homemade Fish

WE WERE BATTING THE BREEZE, Ken and I, when I caught a movement out of the corner of my eye. The fiber glass rod dipped sharply and immediately straightened before I could make a move in its direction. Even before I took up the slack, I knew the fish was gone. It was a typical hit-and-run strike of a feeding school hybrid.

An instant later my partner's rod dipped. Ken struck back with a sharp upward lift. The steel barb bit into a sparsely fleshed mouth, and the first fish of the day was hook-stung and kicking up his fins. It was a short but spirited battle.

After letting him run off most of his steam, Ken lifted the fish into the boat. We admired the chunky, deep-bodied scrapper. The silvery sides, with prominent dark lines, gleamed like burnished silver in the subdued light of early morning. It looked like a smallish striped bass, or rockfish, to me, and I said so. Ken, who is a fisheries specialist with the Game & Fresh Water Fish Commission out of the Lakeland office, pointed out the trademark of this particular member of the striper clan. Once he showed me, it appeared obvious enough. The broken line pattern of the stripes below the lateral line, and the branching, squiggly-line pattern above, especially on the front half of the body, distinguish this "crossbreed" fish, or *reciprocal hybrid,* as the biologists call it.

The striped bass, in contrast, has a body pattern of fairly even stripes.

There seems to be a bit of confusion regarding the current striper and the white bass-striped bass hybrid program here in Florida. A review of the situation appears to be in order.

The saga of the striper clan in Florida got under way during the mid-50's. It began with a survey of the status of the striped bass, or rockfish, as they are better known by many fishermen in this part of the world. Although it is much farther north along the Atlantic seaboard that this popular game fish reaches its greatest abundance, north Florida has a native population in some streams. The Nassau, St. Mary's, and the St. Johns in the northeast, and the Apalachicola and Ochlockonee in the western panhandle are among those rivers having endemic, or native, runs.

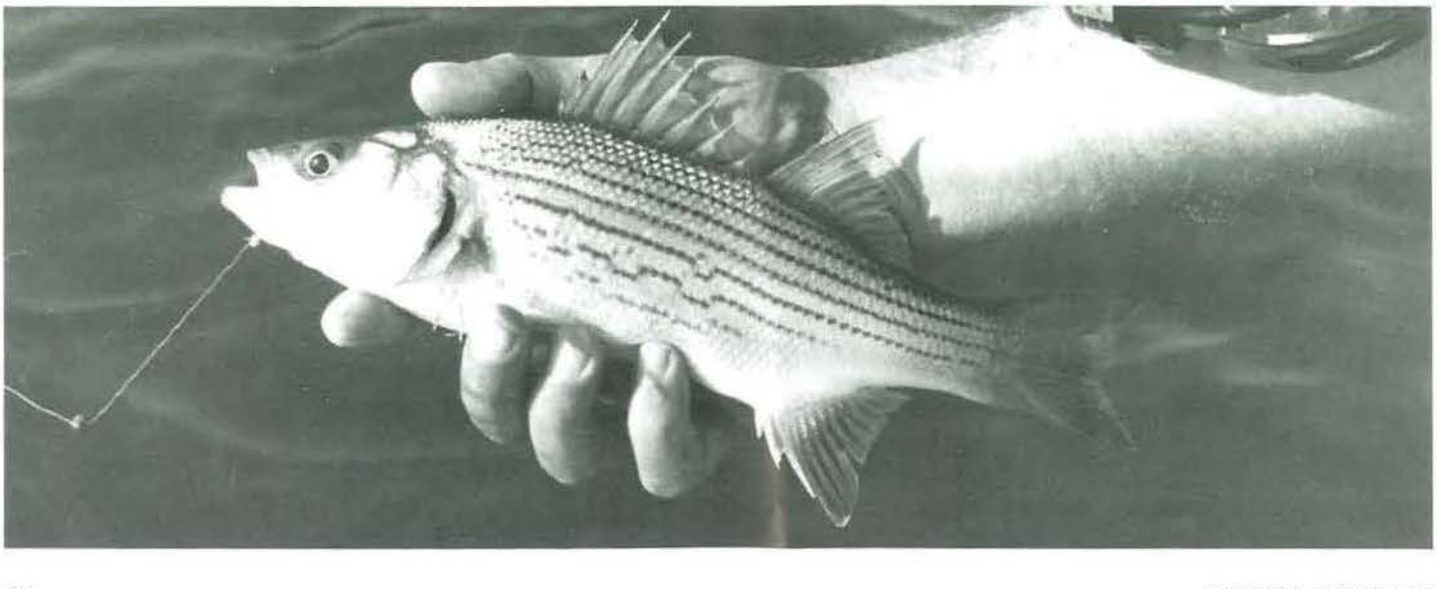
Along about this period in the state's development, probably triggered, at least in most cases, by degradation of water quality, many formerly highly productive game fish lakes experienced a population explosion of gizzard shad, the heavily slimed, algae-eating, nongame relative of the highly regarded American shad.

The possibility of introducing a species that would make use of the overabundant shad as forage, and at the same time itself furnish good angling, was considered. A sport fishing boom on landlocked striped bass in the Santee-Cooper Reservoir in South Carolina, and a bit later in some other waters, seemed to back up an idea earlier

By MORRIE NAGGIAR

Showing its striped bass-white bass ancestry in its markings and body conformation, the reciprocal hybrid, below, is avid feeder, fast grower. The fish at top right on opposite page shows typical stripe pattern of the original hybrid—broken lines on front lower half of body, branching disrupted lines above. Middle fish is striper, lower is a white bass. Both show markings typical of species.

Photo By Morrie Naggiar



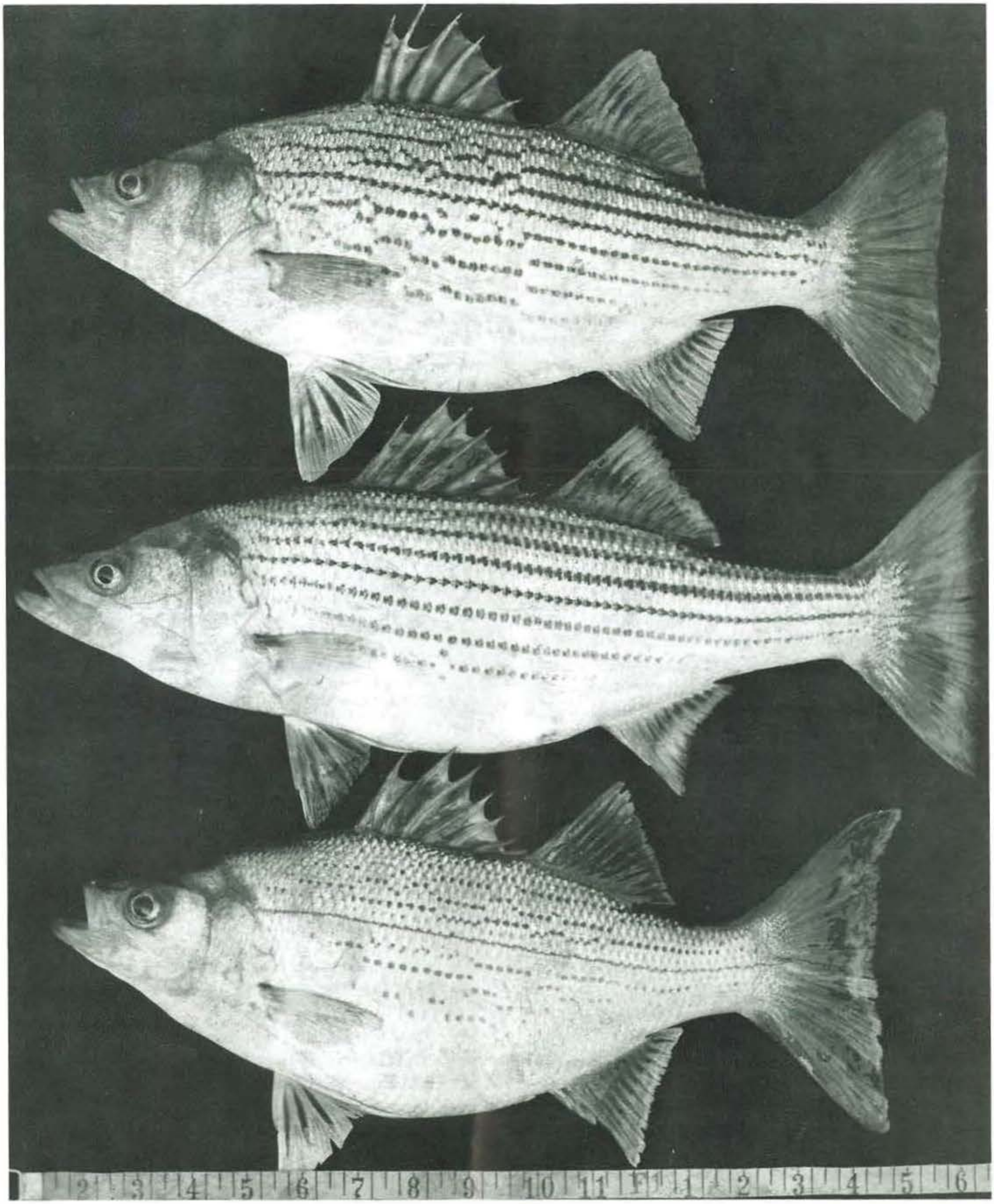


Photo By Tennessee Game & Fish Commission

considered—that the striped bass might fill the bill.

After initial introductions of stripers reared from South Carolina-produced fry, the Commission was successful in growing fingerlings from the spawnings of Florida-captured brood stock. (This program has been touched on in the pages of FLORIDA WILDLIFE a number of times over the years, the most recent in the March 1973 issue.)

Results of striper stocking efforts in Florida were quite encouraging. Survival of fingerlings was reasonably good, and there were a number of

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avid and persistent sport fishermen who invested considerable effort in the search for the right combinations for catching the stocked fish.

Some of these anglers, in some waters, were reasonably successful. But there was one big bugaboo that bothered the fisheries people: The stripers appeared to be overly tempermental in their inclination to accept the anglers' offerings. At this point, the Commission's striper program, under the guidance of Fisheries Biologist Forrest Ware, of Lakeland, took a different tack.

The striped bass possesses certain physical characteristics that put it into a scientific group—a genus, the biologists call it—with a number of other genetically related fishes. The significance of this is that fish within the same genus can be crossbred to produce a hybrid—in effect, a new creature. This approach has been used for years in all sorts of plant and animal husbandry efforts to produce new forms. One result of crossbreeding is that sometimes the hybrid possesses particular characteristics that are superior to those features in either of the parents.

The striped bass, *Morone saxatilis,* shares the genus *Morone* with a number of other fishes, including the white bass, *M. chrysops,* white perch, *M. americanus,* and the yellow bass, *M. interrupta.* It was to these closely related fishes that the biologists turned in an effort to produce a new fish having the good points of the striped bass and at the same time being more readily catchable.

South Carolina, from the vantage point of its experience, existing facilities, and availability of brood stock, led off with the experimental work. A number of other states soon jumped into the hybrid act.

On the home grounds here in Florida, Biologist Ware and his crew, with an assist from Texas fisheries men who were also interested in the hybrid program, successfully fertilized the eggs of the striped bass with white bass milt. During the 1972 season, some 150,000 of these hybrids were produced at the Commission's Richloam station in central Florida. This was a sufficient number to allow a large-scale experimental stocking program.

Although it is certainly too early to make any great claims for this hybrid (for lack of a better identification the fisheries people usually refer to the cross as the *original hybrid*), it seems to offer considerable promise. From the hatchery rearing standpoint, success with striped bass in Florida has ranged from 5 to 30 percent survival from the time the fry are put into the rearing ponds until they are removed for stocking as fingerlings. A 20 percent survival is considered very good. With the original hybrid, survival to the fingerling stage has ranged from 15 percent to something over 61 percent, with an average of better than 30 percent.

Lakeland Ledger Photo

Learning the ins and outs of successfully catching the striper-white bass hybrids is time-consuming and draws heavily on experience and expertise. Jim Campbell, at left, and Al Holman, show off an especially nice catch of reciprocal hybrids from Lakeland area waters. Contest to pick a suitable name for Florida's "homemade" fish was still going on as the magazine went to press.

In Florida waters, striped bass hit an average of just over 11 inches in their first year, whereas the original hybrids measured on the average some 14.3 inches, which puts them close to catchable size quite rapidly. During the second year, the stripers pick up steam and average out at 18.1 inches, compared with hybrids of the same age which hit a mean of 17.6 inches.

The growth potential for the original hybrid has not yet been determined. According to Tennessee data, hybrids have reached 6 to 7 pounds in three years, and older fish weighing as much as 9 pounds were common. Larger specimens were found, but infrequently. One 5½ year old specimen tipped the beam at 14¾ pounds. During the 1974 season, an 18-pounder, a fish in its 8th or 9th year, was taken from Norris Reservoir. It is the largest hybrid thus far recorded.

Original hybrids from Lake Gibson, in the Lakeland area, showed that, true to their striped bass ancestry, shad were the most important single item of food. Other less important foods included silversides, darters, and insect larvae. Although shad predominate in the diet where they are readily available, they are not an absolute requirement for successful maintenance of striped bass hybrid populations. In Tennessee, hybrids introduced into an 8-acre largemouth bass- and bluegill-stocked pond fared well, reaching 8 pounds within 4 years. In another instance, a population of hybrids did well on a forage crop of carp and goldfish.

After the initial success with the original hybrids, the Florida crew directed some effort during the 1973 season to producing a somewhat different striped bass—white bass cross, fertilizing the eggs of the white bass with milt from striped bass. Impetus was given to this phase of the striper project by the fact that the white bass is abundant and readily available in some panhandle streams, so a good source of eggs was assured. Male stripers of the proper degree of "ripeness" are available annually from certain north Florida streams, so the raw materials for this cross were easy to come by. (One problem with the striped bass hatchery production project was the relative scarcity of suitably ripe female stripers.)

Although the cross resulting in the reciprocal hybrid had been accomplished previously in South Carolina, rearing efforts had not thus far been successful.

Guided by South Carolina's experience, Florida fisheries workers were able to successfully rear some 150,000 of this new fish on their initial attempt during the 1972 season. As had been the case with the original hybrid, this was sufficient number to make possible a substantial experimental stocking program.

Although it would appear logical that the offspring of crossbreeding efforts would be the same whether the parents were a male white bass and a female striper, or a male striper and a female white bass, such apparently is not necessarily the case. In general, according to Forrest Ware, the reciprocal hybrid more closely resembles the white bass than it does the striper. Lateral stripes are less prominent than on the striped bass, and are usually continuous above and broken below the lateral line. The body depth is also greater in the hybrid than the striper. The only truly distinguishing character separating reciprocals from the original hybrid and the striped bass appears to be in the number of scale rows below the lateral line. In the reciprocal hybrid, this character is intermediate to the other fishes.

Fish	*Lakes In Which Stocked*
Striped Bass	Julianna, Hunter, Newnans, Talquin
Original Hybrid	Gibson, Thonotosassa, Winter Haven Chain, Griffin, Eustis
Reciprocal Hybrid	Scott, Bonney, Crystal, Morton, Cherry

In a comparative test of hatchery survival and growth, the reciprocal hybrid proved superior to the striped bass on both counts. With the hybrid, survival was 73 percent; with the striper it was 33 percent. By the end of the 8-month test, the reciprocals weighed 3 times more and were 1.3 times longer than the striped bass.

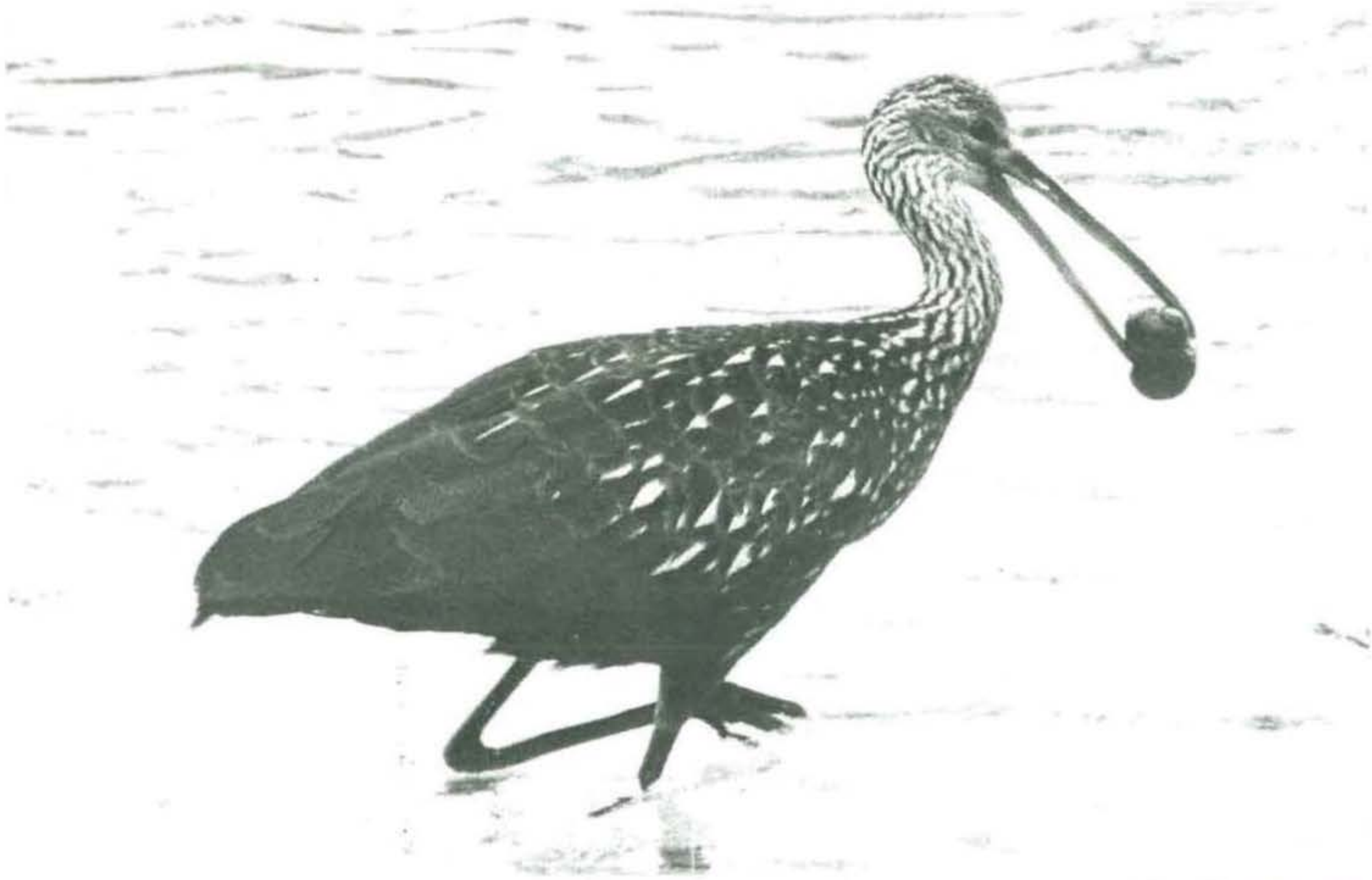
The reciprocals show very fast growth during their early life. At four months of age, most of the hybrids measured from 6 to 7 inches, and by the time they were a year old, their average length was between 12 and 13 inches. One fish reached 14½ inches and weighed 1.7 pounds at one year of age. Because of their greater body depth, reciprocals weigh more than a striped bass of the same length.

Examination of specimens from various experimental stockings indicate that this hybrid feeds heavily on shad but possibly not quite to the extent that stripers do. In central Florida's Crystal Lake, reciprocals fed heavily on threadfin shad, this species making up about 75 percent of the diet. In Lake Parker, at Lakeland, the hybrids fed exclusively on small tilapia during the early summer. In a 3-acre pond containing redear sunfish, potguts, and crawfish, growth and survival of the hybrids appeared to equal that of hybrids in larger bodies of water where shad were available.

The Commission is still in the early stages of the hybrid striper work. Just how either the original or the reciprocal hybrids will pan out as a sport fish is hard to tell, despite the fact that good catches of both have been reported.

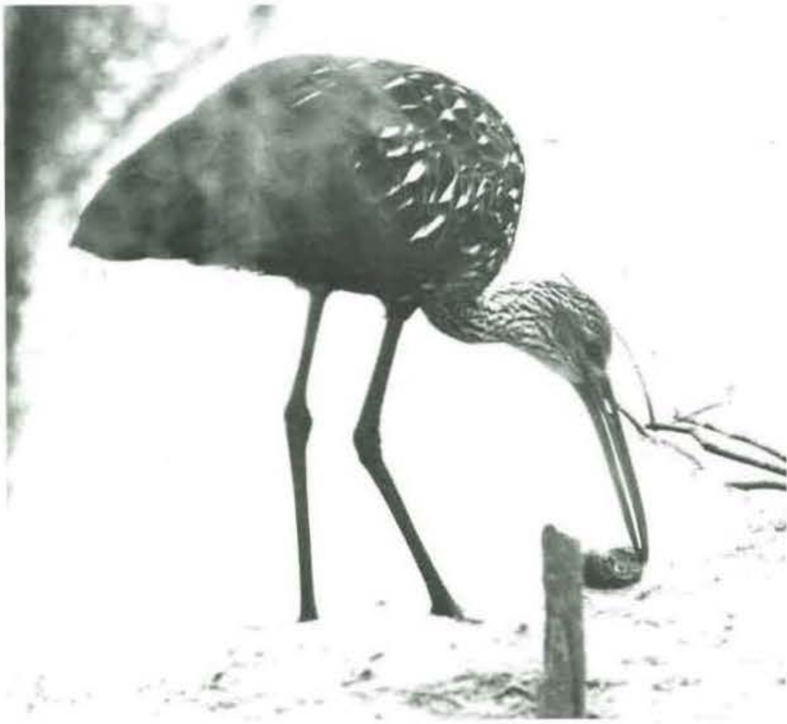
During hatchery pond experiments, various techniques were tested on the reciprocals. The fish were found to be vigorous strikers and strong fighters—definitely worthy of gamefish classification. They were caught on many types of artificial lures, including topwater plugs, minnow-type plugs, spinners, spoons, and popping bugs. Using surface lures produced the most exciting fishing. Frequently hybrids would jump completely out of the water to take the plug.

That is the way the striped bass and hybrid situation stands at the present time. In some places, the striper has produced some seasonal spurts of really fine fishing. The hybrids, both the original and the reciprocal, seem to promise some improvements on the parent stock. Time will tell if the fisheries team has hit on a winning combination. It looks promising. ●



Photos By Wallace Hughes

the limpkin



By MORRIE NAGGIAR

THERE IS A SORT OF MAGIC to the sounds of the wildlands. Each has the power to conjure up in the mind of the observant outdoorsman scenes of other times and other places. Think of it for a moment. Strong mental triggers of this sort may include for you, as they do for me, such sounds as the calling of a high-flying flock of Canada geese; the tremulous, resonant "laugh" of the loon; the ringing, clarion notes of the sandhill crane.

One loud voice crying in the wilderness is that unmistakable, loud, mournful complaint of the limpkin, Florida's unique "crying bird." Written out, the eerie call is something like *kur-r-ee-ow, kur-r-ee-ow, kr-ow, kr-ow.* But such interpretation is only a feeble rendition of the piercing, lost-soul wail. It is no substitute for hearing it.

To see a limpkin picking along the edge of the marsh—it's the picture of intense concentration—reminds one of an overly-large clapper rail foraging for the small animal life that it feeds on. The large fresh water snail *Ampullaria* is a meat-and-potatoes mainstay of the limpkin's diet, but its menu includes a considerable variety of other small aquatic animal life. Like most creatures, it eats what chance puts in its path.

Back in the early days of white settlement, the name courlan, a variant of a French Guiana name, was applied to the crying bird. Later, the name limpkin came into general use here, supposedly from the peculiar, halting gait (as though the bird was limping) that is characteristic of this species.

Although its foraging movements about its fresh water marsh and wooded swamp habitat is so marsh hen-like, limpkins do spend much time perched about in trees and bushes. In flight, with slow, steady wing beat, and with head and neck extended and legs trailing straight behind, they remind one of a small sandhill crane.

Nesting starts during late winter, perhaps around mid-February, although even earlier dates have been noted. Some nesting activity may still be going on well into the summer. The nest may be either a flattish-shaped pile of rushes built to extend a foot or so above the marsh water level, or it may be a grass- or Spanish moss-lined collection of sticks in a waterside bush or tree.

The usual clutch consists of 6 or 7 eggs. The precocious young leave the nest the day they hatch. They are literally born swimmers, for water seems to hold no terrors for them from the moment they emerge from the shell.

In earlier times, the limpkin was avidly sought as food. So relentless was this pursuit that some 50 years or so back, the limpkin was reportedly a none-too-common resident of the state. Fortunately, protection—both in law and in the changing attitude of those who frequently come in contact with it—has saved the species, and it is now a common sight in much of the suitable habitat remaining to it.

In the United States, Florida is the limpkin's stronghold, although its range laps over local political boundaries into the Okefenokee Swamp area of southeastern Georgia, and, occasionally, at least, as a stray elsewhere in the Southeast. It is also known in Mexico and southward into central Argentina and the Greater Antilles.

It's a unique species, this mournful-voiced rail-crane. The limpkin's recovery from earlier thoughtless onslaught is good news to those who value Florida's prodigiously rich and varied natural blessings. Not the least element of this wealth is the white-spotted, brown-bodied bird with the haunting call. ●

The apple snail, a large fresh water mollusk, is the mainstay of the limpkin's diet although a variety of other small aquatic life may be eaten as opportunity presents itself. Signs of these birds' presence are the empty snail shells along the shoreline where the limpkin has deftly removed animal. A half size young bird, bottom photo, tails parent along forage ground.

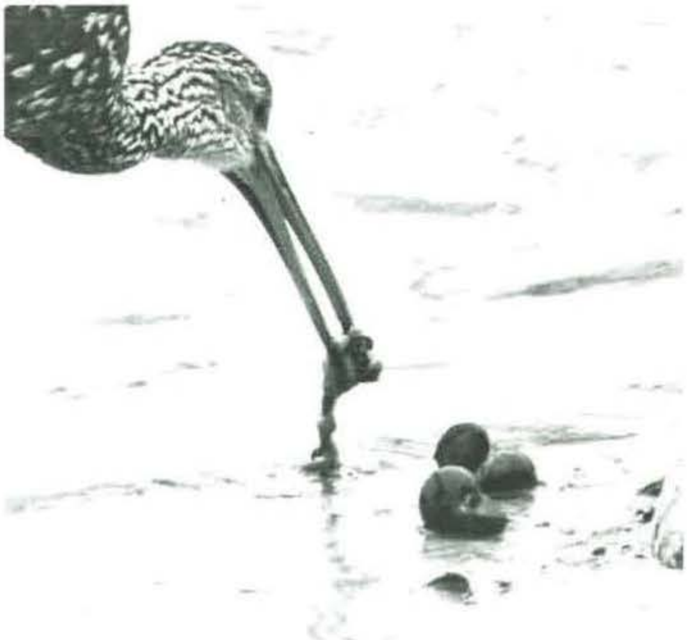
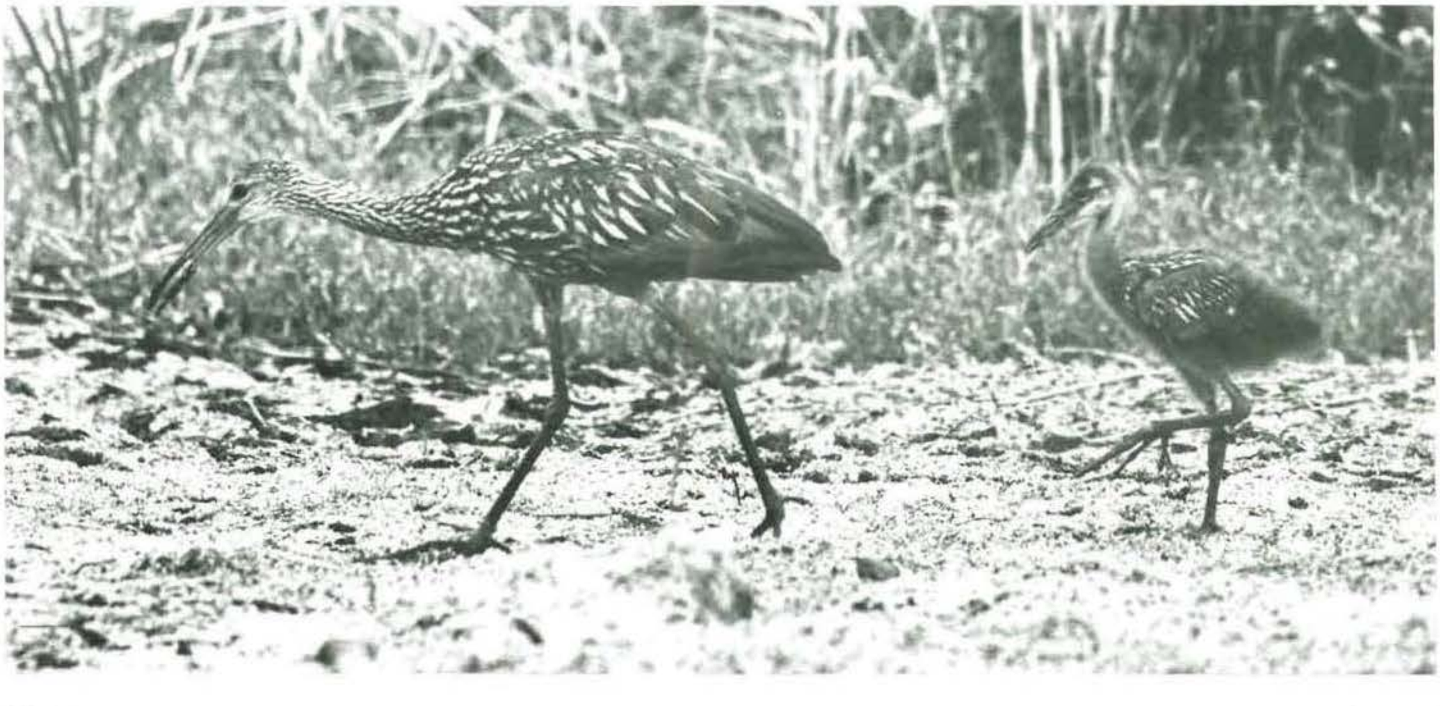
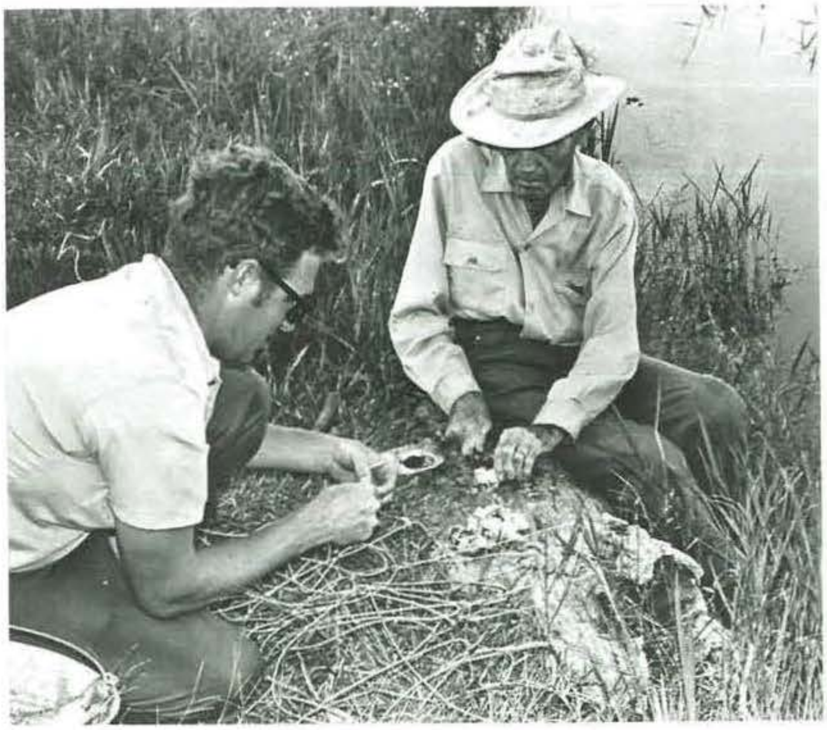


Photo By Mike Fogarty





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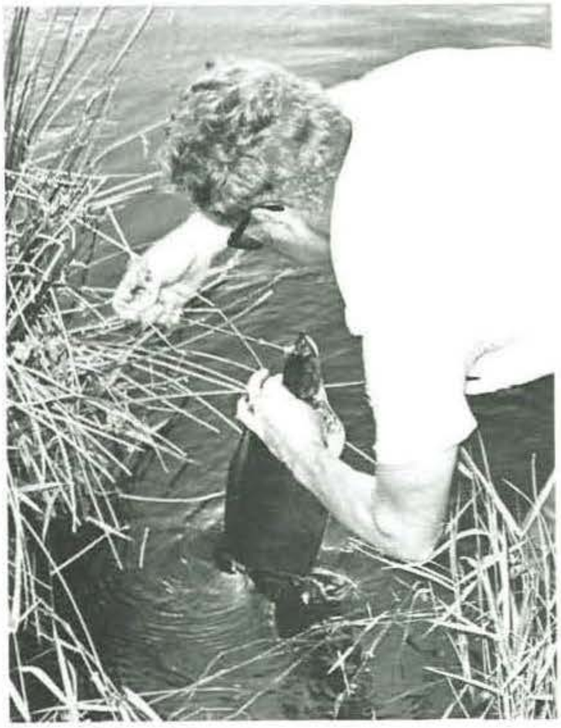

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Turtle Trotline

EVEN IN THE LINEUP of the 330 or so types of cold-blooded animals that are at home in Florida, the softshell turtle is a standout. Looking something like an upholstered pancake, the creature has a long neck, an oddly-shaped, piglike snout, and a fleshy-lipped mouth armed with sharp, bony blades that can inflict a memorable wound on a careless observer.

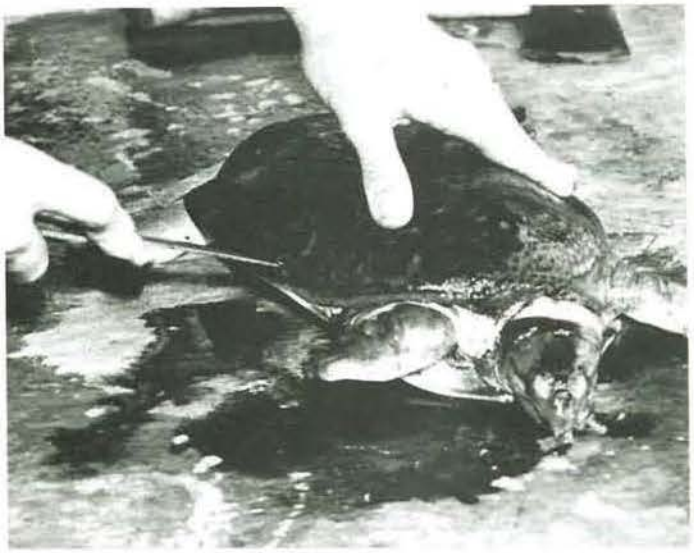
But despite its lack of potential as a winner in the wildlife beauty contest, the softshell is a good bet to take top honors as the center of interest on the dinner table.

One of the obstacles a first-timer has to face in getting a softshell from the slough into the skillet is separating the meat from that tough, leather-cased hull and all that confusing gurry that fills the critter's boiler room. Getting your hands on a softshell in the first place is also a detail to be considered.

So, with camera in hand and younger daughter at heel, we ventured forth to a prime softshell turtle pond to watch how the experts do it. Harrell Revels, Richloam Hatchery supervisor and long-time connoisseur of the softshell, with technical advice and assistance from his granddad, M. W. Revels, of Linden, Sumter County, demonstrated his expertise for the benefit of FLORIDA WILDLIFE readers.

3

(1) With their 25-hook trotline arranged in a loose pile on the pond bank, Harrell and grandfather bait up the sharp, sturdy No. 1 hooks with chunks of shad. Chicken entrails are also good turtle bait. The main line, with its baited hooks hanging from foot-long droppers spaced at 2-foot intervals along the line, is tied to stakes driven into bank or pond bottom and stretched just tight enough to take up most of the slack. Baited hooks are a foot or so under surface. (2) With his thumb and forefinger around the turtle's neck, Harrell maneuvers dropper line in an effort to unhook softshell. That fleshy-lipped mouth is armed with formidable cutting plates that can make a softshell bite a memorable experience. It pays to have a number of replacement dropper lines and hooks at hand when running the line, so hard-hooked turtles can be removed by cutting dropper, replacing with new one. (3) The catch goes into a burlap sack, here being held rather gingerly by daughter.



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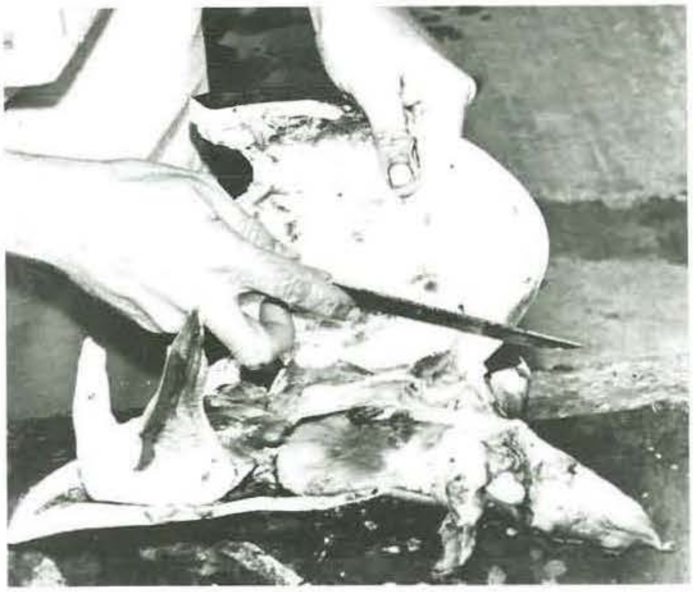

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By MORRIE NAGGIAR

Annette, who is well aware of turtle's defense. Keep the sack wet, tied tightly, and in the shade, and you'll get your turtles home in prime shape. The Revels usually set their lines out in late afternoon, run them a time or two before dark and again early the following morning. (4) A quick chop on the neck with a sharp hatchet is the best way to dispatch a soft-shell. Insert a sharp, sturdy-bladed knife through the skin along the neck and close to the upper shell. Severing skin and connective tissue as you go, cut through the upper shell close to the edge, about as indicated in the photo. Take the cut completely around the shell. (5) Lift the top half of the shell, freeing the connective tissue from the underside with careful strokes of the knife. Slit the skin of neck, peel it back, and cut neck free from its attachment to the shell. Handle all four legs in a similar manner, first slitting the skin then working it free with fingers and using the knife where necessary. Catfish skinning pliers are handy for the skinning job. The first time around is the toughest; on the second try at cleaning a turtle you have a pretty good idea of what you are up against.

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Photos By Morrie Naggiar

(6) Five chunks of good white meat are the result of turtle dressing effort. The yellowish (or orange) fat should be carefully trimmed off meat as, in some instances, it may impart a musky flavor. Don't expect pieces to look much like cut up rabbit or squirrel; the turtle's put together differently. (7) Wife and daughter check out recipe file. In the kitchen is where turtle's best qualities are revealed. One favorite method: Brown the floured turtle pieces in a small quantity of hot oil, add large chopped onion, salt and pepper to taste. Pour over meat a cup of white wine mixed with a cup of water. Simmer in covered skillet until tender, about an hour. Replace liquid as required during cooking. ●

Fish Management Notes

AN EXTENSIVE LIBRARY OF MATERIAL on commercial fish farming is maintained by Catfish Farmers of America. According to Porter Briggs, executive secretary, the organization is in a position to offer interested persons information on any aspect of fish farming. CFA also publishes the bimonthly magazine, THE COMMERCIAL FISH FARMER & AQUACULTURE NEWS. The publication is devoted to keeping its readers posted on what is going on in the fish farming field. Four magazines, THE CATFISH FARMER, FISH FARMING INDUSTRIES, AMERICAN FISHES AND U.S. TROUT NEWS, and AMERICAN FISH FARMER & WORLD AQUACULTURE NEWS, are now combined under the COMMERCIAL FISH FARMER & AQUACULTURE NEWS banner. Address is 530 Tower Building, Little Rock, Arkansas 72201. Subscription rate for the magazine is $6.00 a year.

COMMISSION BIOLOGISTS MONITORING the three day B.A.S.S. tournament at Welaka on the St. Johns River in February reported mortality of fish was somewhat higher than during last year's fishing contest. Largemouths taken during the contest are transported alive to the raceways at the National Fish Hatchery at Welaka. They are held there for observation and tagging, and released on subsequent days. First-day and overnight mortalities were 15 percent, which is twice as high as last year. Warm weather experienced during the 3-day tournament was blamed for the loss.

The catch per fisherman-hour this year was .25 bass, compared with .24 fish last year. The average weight was down slightly to 1.73 pounds from 1.84 pounds. The tournament, according to St. Johns River Project Leader Harold Moody, of Winter Garden, has been useful for monitoring relative fisherman success, for indicating possible changes in the bass fishery from year to year, and for obtaining large numbers of live fish for various research and management purposes.

THE COMMERCIAL HARVEST OF CATFISH from Lake Okeechobee hit its highest point in a year when commercial fishermen landed 82,800 pounds dressed weight during February. Channel cats comprised 45,200 pounds of the total with white cats making up the 37,600-pound balance.

THE SPECTACULAR UPSURGE IN SPORT FISHING success at 22,700-acre Lake Tohopekaliga following the 1971 drawdown has stirred considerable interest in similar treatment for other ailing Florida lakes. Tsala Apopka, once one of the more famous of Florida's fishing hotspots, has fallen on somewhat dire times. Backed by Citrus County commissioners, camp operators, sportsmen's clubs, and others, the Commission biologists are investigating the feasibility of staging a drawdown on the 19,000-acre lake.

Tsala Apopka is not to be confused with Lake Apopka, near Orlando, the deterioration of which was detailed in the March 1974 issue of FLORIDA WILDLIFE. Tsala Apopka is between Dunnellon and Brooksville, in the west central part of the state.

AN AERATION UNIT GIVEN TO THE Eustis Fisheries Research Laboratory by Carl Lowrance, of Lowrance Electronics, Tulsa, Oklahoma, has literally been causing a big stir in central Florida's Lake Yale. The aerator features a pump that mixes lake water with air and discharges the bubbly mix through a venturi device under high pressure. The result reminds an observer of a whirlpool bath. Suspended above the pump is a mercury vapor light to attract insects at night. It is anticipated that the combination of water current, bubbles, noise, light, and insects, plus the odor from a bag of soybean chips placed in the area, will attract fish to the area around the clock. The aerator is located close to a popular fishing dock.

DISCARDED FISHING LINE MAY MEAN LITTLE to the fisherman, but it can spell death for the brown pelican. Lovett E. Williams, Jr., of Gainesville, biologist with the G&FWFC, calls entanglement with monofilament fishing line one of the most serious mortality factors affecting the brown pelican.

The problem lies in the invisibility of the line in the water. The pelican, being a very tame creature, may strike at fishermen's baits or lures. Frequently, the bird becomes hooked or entangled in the line. The line then either breaks in the ensuing struggle, leaving a long remnant attached to the pelican, or the fisherman reels in the bird part way and cuts the line, thinking further struggle will unduly injure the victim.

Sooner or later, the trailing line becomes tangled in a tree or bush, imprisoning the bird until it dies of fatigue or starvation. Williams stated he has seen as many as seven freshly dead pelicans in a single roost at the same time, all trapped by entangled lines.

If a pelican is hooked in such a way that it cannot be removed without seriously damaging the bird, the line should be cut off as close to the hook as possible.

If fishermen will wait until they get to shore to dispose of unwanted line, many pelicans will be saved, says the biologist. And that goes for those plastic, six-hole carrying rings from canned beverages too. Williams says pelicans have been known to dive into the water, sticking their necks in the rings, only to strangle to death. ●

Safety Risk

the purpose of a firearm's safety is to prevent accidental discharge of the weapon—but the device is by no means foolproof

By EDMUND McLAURIN

ALMOST A LIFETIME OF ACTIVE SHOOTING and personal observation of the handling of firearms by others has convinced me that most gun owners put too much faith and dependence on the functional reliability of mechanical gun safeties.

Page 10 of THE HUNTER SAFETY HANDBOOK now being used by the Florida Game and Fish Commission as an educational text succinctly says "The safety (on a firearm) is an important device. It blocks the action of the gun so that it should not fire when the safety is in 'On' position. However, safeties are mechanical devices and sometimes fail to work because of wear or other reasons."

Notice that the text stresses that gun safeties *should* prevent accidental firing but that there is no guarantee they will! I commend the author for accurate context.

The publication's pertinent statements hold true whether a firearm's safety is a manually operated push button, side lever or half-cock notch hammer position, or one of several types of non-manual, mechanical safeties.

In my opinion, any gun owner who has not yet experienced unexpected firing of a loaded gun because of unwisely putting absolute faith in a mechanical safety device is living on borrowed time against a day of surprise and enlightenment, if not serious injury.

Borrowed time recently ran out for a friend of the editor of this magazine. Read about his sad experience with a single-action revolver on page 16 of this issue.

When the victim later took the Ruger "Super Blackhawk" .44 magnum for a safety check, he was told, in effect, that the half-cock safety notch on his handgun can be considered safe only if nothing happens, like a hard bump on the hammer from accidental dropping of the gun. The gunsmith was right.

The only safe way to carry or store a loaded single-action type revolver is to use it five-shot instead of six round capacity, with hammer at half-cock on the empty cylinder.

Had the revolver been one of double-action type, there would have been less probability of the accident. Most double-action revolvers have a trigger-actuated bar that moves up between frame and hammer when the hammer is down and the trigger is released. The usual single-action does not have this mechanical feature.

What type handgun is the safest to have in the home when its owner wishes to keep it loaded and readily accessible for emergency protection? I cast my vote for a double-action type revolver, kept in a tight holster, with hammer down on an empty chamber of the cylinder.

Why? First of all, the action of a double-action type revolver must then be fully operated to bring a live cartridge under the hammer—whether the gun is in a holster or out. Any partial cocking or less than full hammer activation, in the event of accidental hard bumping of the exposed hammer, would result in the hammer falling back on the empty chamber.

However, when the double-action revolver is deliberately withdrawn from holster and activated by either pulling the trigger or by manually pulling the hammer back to full cock, single-action style, a loaded chamber is revolved to the central position and the handgun is ready to fire on hammer fall.

Why use a tight fitting holster for a double-action revolver during the handgun's average long idleness on closet shelf or in bureau drawer? A tight fitting holster prevents the handgun's cylinder from possibly turning inside the holster from any activating outside force (as in accidentally dropping the holstered handgun) and thus bringing a loaded chamber into central firing position.

A safety check can be made by placing a completely *unloaded* revolver in its holster, and then determining if its cylinder can be rotated through applied outside force while the handgun is still encased. If the cylinder will turn enough to bring the next chamber into alignment with the barrel and hammer, you should somehow either increase holster tightness on the handgun cylinder or get a new, tighter fitting holster. Assuredly, a tight fitting holster is an added safety factor, and any handgun worth owning deserves the protective housing provided by a good holster.

Probably the safest revolver models to have about the home were some of the yesteryear Iver-Johnsons. Older readers will likely recall the "Hammer the hammer" national magazine revolver advertisement of the company claiming that

(*Continued on next page*)

(*Continued from preceding page*)

one could take an ordinary household hammer and pound the hammer of a chamber-loaded Iver-Johnson revolver without the handgun firing. The claim was true, but only for certain models of Iver-Johnson handguns in which the firing pin was located in the frame without mechanical alignment with revolver hammer until the trigger was pulled. Both the Iver-Johnson Model 67 "Viking" and the Model 844 "Supershot" had this unique safety feature. There are still many of these Iver-Johnson models in American homes.

Where an autoloading type weapon is preferred for ready home protection, I recommend the firearm be kept in unzipped, roomy, rug style, rectangular shape case, without a loaded cartridge in the chamber, and that the usual slide-locking safety lever not be activated. Instead, I suggest that the cartridge-loaded clip magazine be only partially inserted in its handle housing.

With no loaded round in chamber, and the clip magazine too low in alignment for possible cartridge pickup on accidental slide activation, an autoloader is rendered relatively safe in idle life.

However, should a need arise for emergency use of the handgun, the loaded clip magazine can be quickly knocked to full insertion by sharply hitting the bottom of the clip with heel of left hand as right hand removes the handgun from its unzipped case bed. The moment the heel of left hand shoves the clip magazine fully into its handle housing, the left hand is used to pull back and release the already unlocked slide, to feed (by manual release and resulting return spring action) a loaded round into the chamber, a forceful sequence which at the same time mechanically cocks the weapon for firing.

This method is much faster in execution than reading its word description here. With only a little practice, using an *empty* clip magazine, an autoloading pistol can be picked up in hand and given simulated chamber loading and automatic mechanical cocking with surprising dexterity. Stopwatch timing shows that I can execute the described sequence in an average time of 4/5ths of a second after I pick up the handgun with my right hand.

The secret of acquired speed and dexterity is to practice repeatedly with empty clip magazine, making all step-by-step hand executions with deliberation and the same way time after time, until handgun pick up and almost simultaneous chamber loading becomes both natural and fast.

An autoloading handgun with only partially inserted cartridge-loaded clip magazine, and an empty chamber, is relatively safe in a home where there are no children. Only manual activation of clip magazine and slide can cause it to chamber load and fire, for first shot. Even if the autoloader is dropped, the safety factor continues to accrue to any person in the immediate vicinity, for it would be rare, indeed, for accidental dropping to cause the clip magazine to be pushed to fully inserted position and also have the slide simultaneously move back and chamber a live round of ammunition. Usually, the already half-out clip magazine will simply fall out of a dropped gun.

The Smith & Wesson "Masterpiece" double-action, swing-out cylinder style revolver in either .22 or .38 caliber is a fine handgun for both pleasure and protection.

Many persons tend to favor a large caliber handgun—say, a .357 or .44 Magnum revolver, or a Colt .45 caliber autoloader—when purchasing a handgun with home or business protection in mind. The usual tendency following such a purchase is to fire 20 or 30 shots in informal target shooting, to field test performance, then to put the firearm aside, fully loaded, against day of possible need. This is a mistake. Firing recoil of a large caliber handgun makes it difficult for the average infrequent user to shoot one accurately.

Better is selection of a protective handgun in a caliber that encourages regular practice and the resulting pleasure of gun mastery, tied in with lower cost ammunition expenditure.

I recommend a Colt Match Target "Woodsman" .22, with 4½-inch barrel in an autoloading type pistol. The current heavy frame, short barrel version of the standard 6-inch barrel, fast-firing Match Target "Woodsman" is very accurate, is enjoyable to shoot, and, of course, takes low cost, readily available ammunition. The "Woodsman" model autoloader has built-in safety feature of not firing unless its clip magazine is fully inserted. Mechanical functioning of the handgun's action also locks the slide in the open breech, rearward position following the last shot from the 10-shot capacity clip magazine. Mild cartridge recoil contributes to handgun control and more accurate shooting, yet the firepower is there to back up one's first shot, if needed.

Good .22 caliber revolver model choices include the Smith & Wesson K-22 "Masterpiece," Colt "Diamondback," and High Standard "High Sierra," all swing-out cylinder style double-actions.

For home or business protection, some readers may scoff about suggested selection of a .22 caliber handgun. Such criticism is a bit presumptuous.

The .22 cartridge in long rifle form is one of the most accurate cartridges loaded commercially. Properly placed .22 long rifle bullets have even killed bears and mountain lions raiding Western ranches, and have put many persons in their graves. Hitting is easier with a .22.

It may surprise some readers to learn that a .22 caliber Colt Match Target "Woodsman" autoloading pistol frequently was the preferred auxiliary combat weapon for overseas servicemen on offensive patrol, where close enemy contact could be expected.

As I have already pointed out, unless a person puts in considerable practice with a large caliber handgun, he or she is better off with a good .22 for home or business protection. Too often, large calibers like the .45 Colt, .357 and .44 Magnum calibers are simply too much explosive power for the average once-in-awhile user to accurately control. In such instances, hitting is frequently reduced to mere chance.

After all, if you were being shot at, wouldn't you prefer that the handgun used against you be one of large caliber and heavy recoil in the hands of someone who has not mastered its accurate shooting than be shot at with a rapid-firing .22 caliber more likely to be controlled and fired accurately? Keep in mind, it is the bullet that hits its intended target that counts when you're forced to shoot in defense.

Whatever the handgun type and caliber, safe handling is closely tied in with wise decision to habitually utilize the handgun's safety during the gun's idle moments, but not to put full dependence on its unfailing mechanical performance.

OCCASIONAL PRINTING AND EDITING ERRORS are understandable. Typesetters and proofreaders often work against the office clock's steady progress toward a deadline hour, and editors must also regularly delete sections of material already set in type, in order to stay within space limitations—sometimes without having time to re-read the edited version for precisely correct continuity.

Such a gremlin caused an error in the printing of this column in the February 1975 issue.

I had written about the merits of short length rifle models, mentioning several that were ideally suitable for fast gun handling afield. I then made reference to practical short overall length shotgun models, preceding the listings with a brief introductory paragraph that specifically identified the named models as being of shotgun category.

Unfortunately, the two-line introductory paragraph was inadvertently deleted in making up the page. The omission changed the succeeding paragraphs completely in meaning, creating the impression that the mentioned *shotgun* models were merely additions to the previously listed short length *rifle* models. Simply, the printed text was cut at a point that totally changed the meaning of what followed. Even the editor didn't know of the error until I advised him of the situation and asked that he check my original manuscript in support. The error was just one of those things connected with producing a magazine or newspaper. ●

Handgun kept at home or place of business for protection should also be used for pleasure. Here two shooters fire at white wood strip nailed to a black-painted post, to develop control of horizontal gun movement.

Shown above is Colt Match Target Woodsman, 6" barrel, and below, the Colt Match Target Woodsman, 4½" barrel.

CONSERVATION SCENE

Firearms Registration

"THE NATIONAL RIFLE ASSOCIATION has been on record for many years contending that firearms registration was just the first step in the process leading to total confiscation," said NRA Executive Vice-President Maxwell E. Rich, "and we are seeing this happen in the most graphic fashion here in the Nation's Capital."

General Rich, the head of the million-member sportsmen's organization was speaking of a recent move by a District of Columbia council member to amend the Washington Metropolitan Police regulations in an attempt to seize 51,645 privately-owned and legally registered firearms. The proposal would allow private citizens to own rifles only, and ownership would come after police approval and the issuing of a license.

"Law abiding members of the Washington community have complied with local law, they have registered their privately-owned firearms, they have appeared at the police station with their firearms, and they have been duped," Rich said of the proposed amendment.

"Once again it is the law-abiding firearms owner who has come under attack. As the National Rifle Association has been pointing out for many years, it's the criminal who misuses the rights and neglects the responsibilities of private firearms ownership. But the honest citizen pays the price," the NRA executive vice-president said.

Restoration Ordered

A U.S. DISTRICT COURT JUDGE has ordered a south Florida housing developer to restore a mangrove wetland which he drained without obtaining a permit from the U.S. Army Corps of Engineers.

The Corps had refused to grant the developer an after-the-fact permit and informed him to restore the important wildlife area to its original condition, including replanting the mangrove fringe and filling all canals. The developer protested and the case was referred to the U.S. District Court of southern Florida.

The Court ruled in favor of the Corps and directed that the restoration be carried out. It also permanently enjoined the developer from "selling, conveying, or disposing" of any real property involved until restoration is complete.

The Court stated that it had "no desire to create a hardship upon the presumably innocent, albeit negligent, property owners" that had bought from the developer. "However," the Court said, "now that enforcement of our environmental laws is the rule and not the exception, future reliance upon the compassion of the Court and Government is not warranted."

Dial-A-Park

A NEW POLICY HAS BEEN DEVELOPED allowing campers to make reservations directly by telephone with the Florida state park of their choice, with the advantage of instant confirmation, according to an announcement by Harmon Shields, executive director of the Department of Natural Resources, Tallahassee.

"Telephone reservations may be made year-round at 20 state parks and during the summer months (June 1 through Labor Day) at four other parks," said Shields, adding that camping on a first-come, first-served basis will be observed at 12 other parks, as well as on a 50% basis at all state parks and recreation areas taking reservations by telephone.

Calls made to the parks will be received between 8:00 a.m. and 5:00 p.m. Eastern Time, with collect calls being refused. Requests for reservations by mail will also be refused, said the announcement by Shields.

For a list of park locations and telephone numbers, contact The Florida Department of Natural Resources, Tallahassee 32304.

Environmental Center

THE FORMAL OPENING IN PANAMA CITY of the first Environmental Center operated by four state agencies was held in February. The facility is located in the Town and Country Office Complex on West U.S. 98. It is the first of 10 environmental centers planned throughout the state to give the public a one-stop convenience operation in obtaining permits and advice for shoreline development projects. Other centers to open shortly will be located in St. Petersburg, Orlando and Miami.

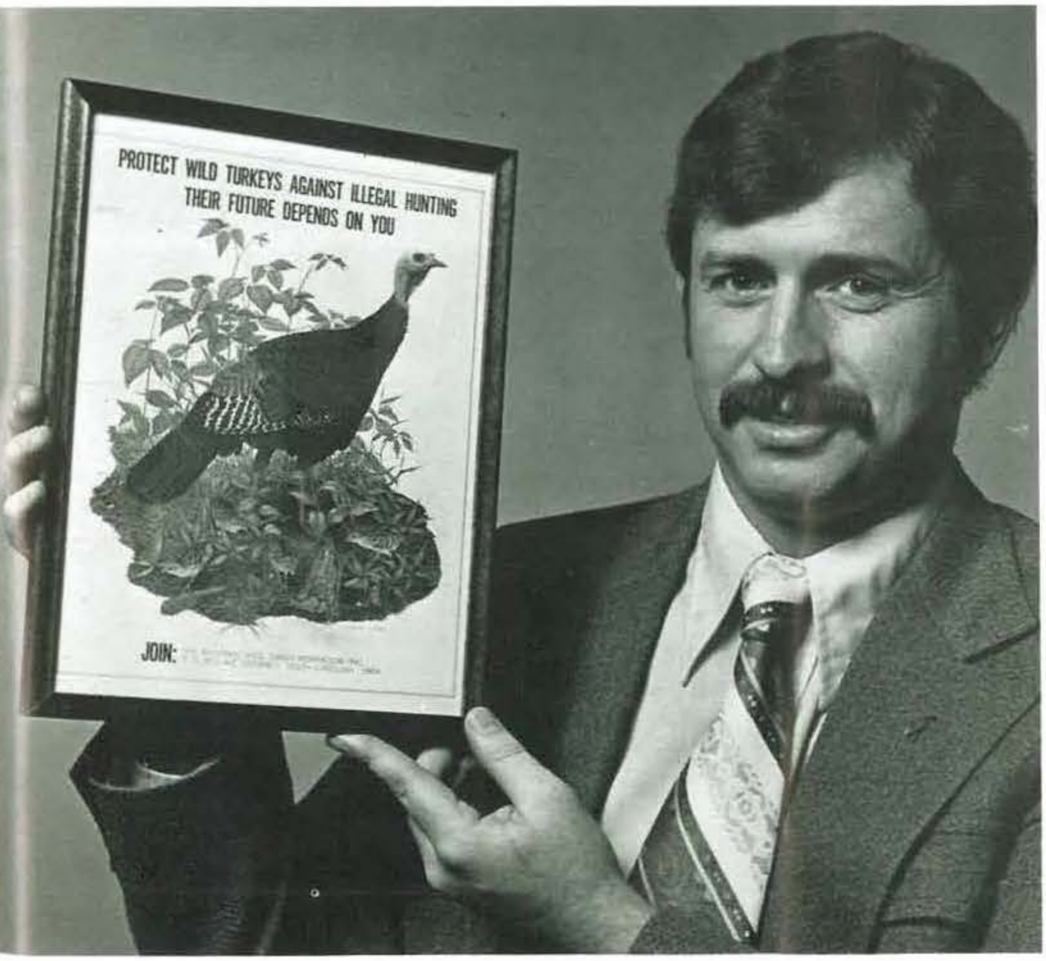
Agencies operating the environmental centers are The Department of Natural Resources, the Trustees of the Internal Improvement Fund, the Game and Fresh Water Fish Commission, and the Department of Pollution Control. Regional planning offices also will be located in offices convenient to the centers.

The environmental centers are being established to cut red tape for persons needing permits for dredge and fill projects.

Help the Turkey

"ILLEGAL HUNTING IS A MAJOR PROBLEM facing the wild turkey in America," says Tom Rodgers, executive director of the National Wild Turkey Federation with headquarters in Edgefield, South Carolina. Taking the initiative to draw public attention to this problem, the Federation is distributing this poster (shown below by Rodgers) throughout the country. It's the first major project funded by donations and the Federation's membership, Rodgers said, and it's the first step taken by the young organization toward "waging a campaign against illegal hunting."

Posters may be obtained free of charge for display in gun and tackle shops, hunt clubs, check stations, etc., by writing The National Wild Turkey Federation, P. O. Box 467, Edgefield, South Carolina 29824.


PROTECT WILD TURKEYS AGAINST ILLEGAL HUNTING
THEIR FUTURE DEPENDS ON YOU
JOIN:

Conservation Posters

TWO SETS OF WALL CHARTS focusing on the environment, ecology, and conservation have been prepared by the Conservation Service of the Boy Scouts of America, which bills the posters as "invaluable study aids for elementary, high school, and college teaching."

"Today's young people are growing up amid an environmental awakening," said BSA conservation executive Walt Wenzel. "The misuse of resources . . . has loosed a barrage of facts and figures—some reliable, some not, and some deliberately misleading. These posters will help people understand the basic processes that make our planet work." Wenzel hopes the sets, which are available from the BSA's Supply Division, will also be useful to state and federal conservation and education departments, conservation education centers, and, in short, "any group which is curious about how the environment affects them and how they can affect the environment in a useful way."

Each set contains ten posters, measuring 17" x 22". An instructor's guide comes with each poster in the set.

The sets are available from Supply Division, Boy Scouts of America, PO Box 521, North Brunswick, NJ 08902, for $2.80 per set. Order No. 12019 for the set of ten "Environmental Posters," and No. 12024 for "Ecology and Conservation Posters." The sets are printed on good quality paper stock and will continue to give service over many class periods.

Eyes Up

IN RECENT YEARS Least Terns have been driven from their beaches by people pressure—development and vehicles. According to Audubon Society member Erma J. Fisk, of Tavernier, the species is now reported nesting on rooftops in many areas—on department stores, supermarkets, shopping plazas, banks, and other buildings.

"Up to fledging, when they must cope with urban traffic and parking lots, they seem to do as well as in their traditional beach habitat, as they are little disturbed," says Mrs. Fisk. "We would very much like reports on Least Tern rooftop nesting," she says.

Colonies range in size from 5 to 100 pairs. They have been documented in Pensacola, Fort Lauderdale, South Miami, Pompano Beach, Boca Raton, Tequesta, and Deerfield.

To plot distribution and the extent of such high-rise nesting

(Continued on next page)

(*Continued from preceding page*)

in Florida, the Audubon Society would appreciate specific locations, dates, and estimates of colony size—which can be detected by watching for birds flying to roofs or carrying fish.

Building managers, properly approached, may permit an observer (never more than two should go) on their roof so that numbers of nests and chicks can be counted on weekly visits through the breeding season of May and June.

"Warning," says Mrs. Fisk: "The camouflage of eggs and young is so good that they can be stepped on unwittingly. Too, at the least disturbance chicks large enough to run will hide in gutters or downspouts. They often cannot extricate themselves and will be abandoned by their parents. Observations should be made, as much as possible, from the place of entry onto a roof, with the aid of binoculars. Incubating birds can be counted by waiting quietly until adults resettle on their nests, if you disturbed them with your arrival; chicks can be counted with binoculars."

Address nesting reports to Erma J. Fisk, c/o Florida Audubon Society, Drawer 7, Maitland, Florida 32751.

National Survey

IF YOU DON'T HUNT OR FISH that doesn't mean you won't be contacted by the U.S. Fish and Wildlife Service about the wildlife-related activities you *do* enjoy.

The "1975 National Survey of Fishing, Hunting, and Wildlife Associated Recreation" now being started will be broadened to reflect and document a growing national interest in the entire spectrum of wildlife resource uses.

The 1975 survey will differ from past studies which have been done at five-year intervals since 1955. Not only will the base of hunters and fishermen be expanded by sampling a far greater number of rural communities, but the 1975 survey will add new questions for those people who enjoy wildlife from a different perspective such as photography and birdwatching. This was prompted by dramatic increases in visits to National Wildlife Refuges by the general public in the past five years.

Crow Cuisine?

NOW THAT THE CROW has been declared a "game" bird, a serious question is raised by John Madson of Winchester-Western: What's a good recipe?

"In many states," says Madson, it's unlawful to discard the meat of a game species. If you shoot it you gotta eat it, and that must apply to crow as well as quail."

"Some wild game cookbooks have crow recipes—often at the back of the book with baked skunk saddle and boiled bushes. Now and then a sportsmen's club game dinner will feature crow hash or crow chili, but there's usually a lot left over.

"The last crow we ate was fixed by Roger 'Fence-Cutter' Willis, of Fort Cobb, Okla. (That was his legal name, earned by adjusting certain park boundaries during his one political campaign, and he was a specialist in pickled crow gizzards. We always liked Fence-Cutter but didn't care a whole lot for his pickled crow gizzard.) It was about what you'd expect, considering what a crow puts through its gizzard in a bad year. Or even a good year.

"Still, we've been told by a few bull cooks that barbecued crow is fit for the gods if you have the right sauce. Maybe so. And to such culinary artistes we make a standing offer: one crow (in feather) for one quail, and we'll even throw in a pint of Fence-Cutter's gizzard pickle."

For that BIG ONE that didn't get away!
WHO CAUGHT WHO ?
GOTCHA !

ELIGIBILITY REQUIREMENTS
SPECIES

LARGEMOUTH BASS	8 pounds or larger
STRIPED BASS	10 pounds or larger
CHAIN PICKEREL	4 pounds or larger
BLUEGILL (BREAM)	1 ½ pounds or larger
SHELLCRACKER	2 pounds or larger
BLACK CRAPPIE	2 pounds or larger
REDBREAST	1 pound or larger

TO BE ELIGIBLE . . .
all fish must have been taken from the fresh waters of the State of Florida, on conventional tackle, with live or artificial bait, in the presence of at least one witness. The catch must have been weighed and recorded at a fishing camp, tackle shop, or similar establishment, by the owner, manager, or an authorized employee. No citation will be issued for a record-sized catch unless fish was preserved for examination.

FLORIDA WILDLIFE'S
FISHING CITATION

is available without charge to subscribers to FLORIDA WILDLIFE Magazine and their immediate families who catch any of the listed freshwater fish of the prescribed minimum size. A citation for framing will be mailed to the applicant upon receipt of the following application form properly filled out and signed. Only those applications received within 90 days of the date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE Date________________
Game & Fresh Water Fish Commission, Tallahassee, Fla. 32304

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print)________________________________
Address________________________________
City________________ State____________ Zip No.__________
Species________________ Weight__________ Length__________
Type of Tackle________________________________
Bait or Lure Used________________________________
Where Caught____________________ in____________ County
Date Caught__________ Catch Witnessed By________________
Registered, Weighed By________________ At__________
Signature of Applicant________________________________

CUT OUT AND SAVE THIS APPLICATION BLANK

Wild Turkey With Poults

Photo By Lovett E. Williams, Jr.

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